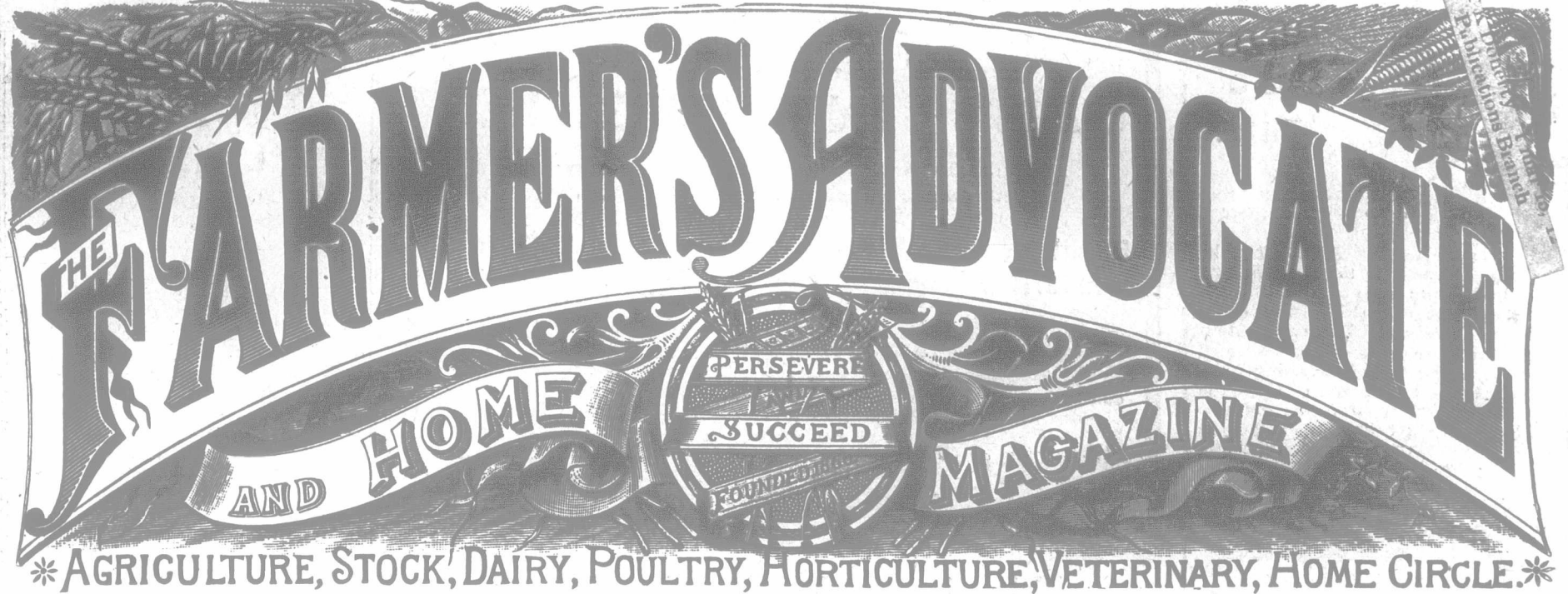


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Vol. XLVII.

LONDON, ONTARIO, FEBRUARY 8, 1912.

No. 1011

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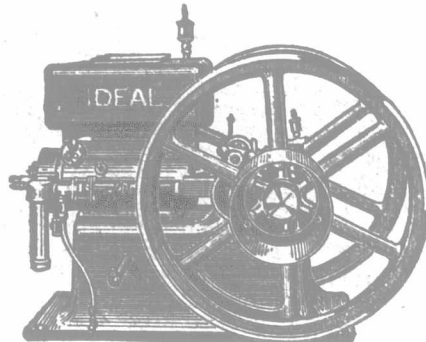
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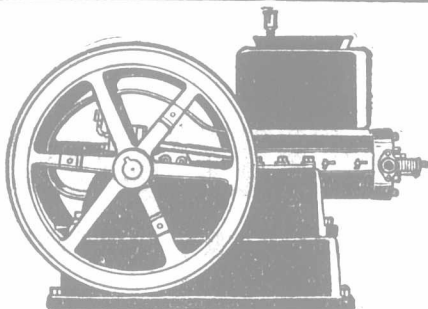
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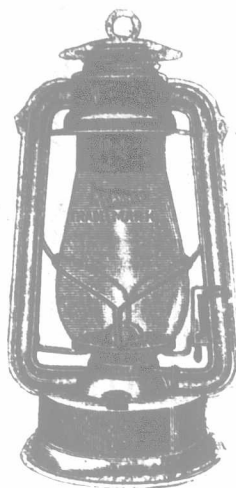
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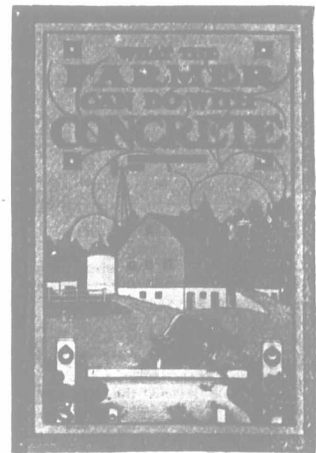
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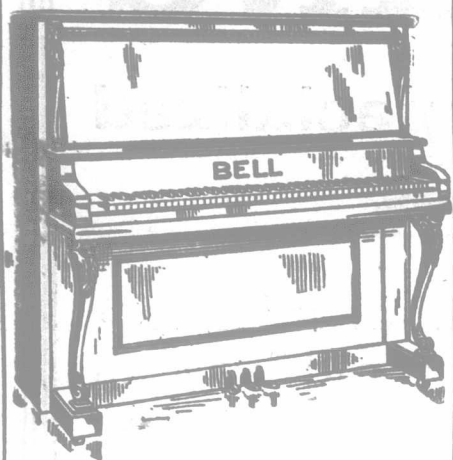
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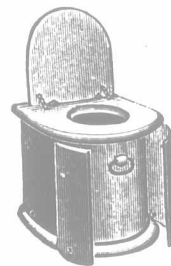
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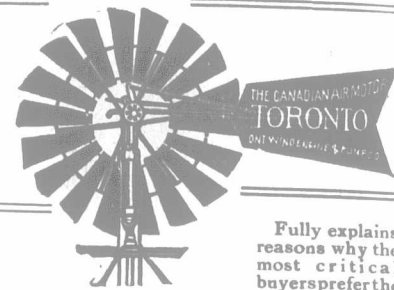
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Vol. XLVII.

LONDON, ONTARIO, FEBRUARY 8, 1912

No. 1011

EDITORIAL.

No one who shrinks from knowing the exact facts of his business need expect to master it.

Manitoba wants a population of a million, and a gathering of enthusiastic citizens have declared she must have it before the centennial census in 1921. That's ginger.

Ice twenty-four inches thick in January, much it formed under a thick protecting coat of snow, spells some January weather for the Western part of Ontario.

"I miss very much the corn silage and roots," complains an Ontario farmer now living in Manitoba, who describes in the Winnipeg "Farmer's Advocate" his present none-too-successful method of steaming cut hay, oat sheaves and chopped wheat and oats. No wonder. The pleasure of utilizing these convenient and excellent winter foods is hardly realized till one is without them.

Eight thousand two hundred and seventy-two homicides were reported in the United States in 1911, with 74 legal and 71 illegal executions. As an American weekly remarks, no wonder they have so many murders, when there is only one chance in 112 that a murderer will be executed by law. Swift and sure legal execution is necessary to deter murder on the one hand, and lynching on the other.

Appearances are well worth considering in making farm improvements. While utility should be the sine-qua-non, it is worth while remembering that a farmstead is more than a place of business; it is a home, and farm architecture, even in such respects as silo roofs and proportions of outbuildings may not be ignored without permanent affront to the aesthetic sense. Well-placed buildings of pleasing proportions often cost little or no more than eyesores. Make the whole farm a home.

The good sense, the courage and the real statesmanship of President Wm. H. Taft shines out in these sentences from an article in the Century Magazine defending his arbitration treaties: "The question has been asked, in tones of horror, 'Can a nation properly submit to a joint commission or any other partly foreign body a question which affects its vital interests, or, worse still, its national honor?' I say a nation can. Indeed, I would rather take my chances of securing a just decision from a commission of honorable men than from the god of war."

The past ten months in Western Ontario have been characterized by a succession of extremes. An interrupted and, therefore, belated seeding was followed by the driest and hottest growing season in the memory of the oldest inhabitant. Autumn was so wet that there was only a short period when anything but sod could be properly plowed. An early spell of winter in November was followed by an unseasonably mild, rainy December which converted barnyards into sloughs and convinced every farmer that he must have the muddiest in the neighborhood, since he could not imagine anything much worse. January brought the coldest snap in years, thermometers in the neighborhood of London registering 24 and even 28 degrees below zero. We await the next turn with interest.

Training of Rural-school Teachers.

The quality of rural education is a matter of vital concern not only to the agricultural population, but to the nation as a whole. There are important particulars in which the interests of city and town schools differ from those of rural schools, and with which the makers and administrators of school laws and regulations must be familiar if one or other class of schools is not to suffer. For obvious reasons, the class that will suffer, if either, is likely to be the rural one.

It is a trite saying that, "As the teacher, so is the school." Expensive buildings, profuse equipments and loads of textbooks, with a poor teacher, do not begin to compare for excellence with the efficient teacher in a meagerly equipped school. The late President Garfield declared, in effect, that a student seated on a log in the woods, with Mark Hopkins for a teacher, would become more highly educated than by sitting the same time under the formal routine of lecturing in the conventional university.

We do not fully accept the statement that teachers, like poets, are born, not made. Better say, good teachers are born, and then made. A good teacher cannot be made out of one who lacks sympathy, patience, animation and certain other native qualities, but one who possesses natural aptitude must undergo a course of training before he reaches a high degree of efficiency in the teaching art. Scholarship, as ordinarily understood, may be necessary, but it is not the chief quality for successful teaching.

In town or city schools, where a number of teachers are working together, who can consult each other, and where they can turn in difficulty to a usually experienced principal, individual excellence may not count for nearly so much, but in the one-roomed rural school, where one and the same person combines in kind, if not in degree, all the activities of a whole graded school staff, it is emphatically true that, as the teacher, so is the school. The maintenance of a sufficient supply of properly-trained teachers becomes at once the most important and probably the most difficult problem connected with the administration of a system of rural education.

This problem of teacher-training is a complex one. It involves the rejection of aspirants who are intellectually, physically or temperamentally unfit; it involves supervised application of presented theories, preferably in the important interests of school management, under conditions similar to those obtaining where the actual teaching will be done; and it also involves the development of the power and habit of self-criticism which will abide with the teacher and make future experience fruitful of improvement.

The experience of Ontario is worth reviewing. Back in the fifties, and for a quarter of a century, it offered Normal School instruction, with practice in a model school, to all persons ambitious enough to make a moderate investment of time and money for this training. Others were admitted directly to the work of teaching on their passing a prescribed written examination conducted by the several county boards. For the next quarter of a century, dating from the middle seventies, it tried the combined Normal School and county Model School system. The abolition of the county Model Schools, a few years ago, introduced the third experiment.

As compared with the second or third methods, there is nothing to be said in favor of the first. So long as preliminary training remains entirely

optional, the majority of the recruits will always enter the profession untrained. But there is room for discussion of the comparative merits and possibilities of the second and third.

The second system—the combined county Model and Normal one—cost the Province much less money than the third, and distributed the cost to the young teachers in such a way that they bore it much more easily. But in a matter of such vital importance as teacher-training, the item of cost is a minor consideration. If the third system—the one at present under trial—is decidedly the best, but the cost bears too heavily to get a sufficient supply of good teachers, then the Province ought to bear such proportion of the cost as will encourage a sufficient supply of persons of the right quality to take the course. Reason and experience show that the shortage of teachers falls most heavily on the rural schools.

But, apart from consideration of cost, is the third method as good as the second one, or as the second one might have been made? It is not so very many years since Ontario was very proud of its combined county Model and Normal School method of teacher-training. At the greatest exhibition of educational systems and results that the world ever saw—the World's Fair of 1893—this method was very specially commended, and on it, more than on any other feature, Ontario's educational laurels at that time rested. The high praise bestowed on it may have rendered the authorities insensible to the shortcomings observed by those who were immediately connected with carrying on the county Model Schools. These schools—one or two of them in every county—were centers of professional stimulation in their respective districts. Every inspector had a share and an interest in the efficiency of his Model School. County boards of examiners exercised some measure of discretion in regulating the standard of certification at their respective schools to meet the needs of their territorial jurisdiction. This reasonable practice continued until the time that county-board certificates were made provincial. Ostensibly, this change was made to relieve the scarcity of teachers that existed in certain of the newer districts of the Province. In these districts salaries were lower than in the older counties, and what should have been foreseen soon happened. The supply of teachers that naturally belonged to these districts, armed with Provincial certificates, sought schools in the counties where better salaries were offered. The ill-effects followed: Competition for schools lowered salaries to a degree that failed to hold good men and women in the profession, and the standard of efficiency in the Model Schools themselves was reduced. The latter result occurred in this way: Examiners said that they might as well pass their own poor candidates as have their schools filled with as poor or worse material from other counties. It is needless to refer to the effect it would naturally have on the classes of students when they realized that there was no danger of failing at the examinations. In some counties two schools were doing the work that might equally well have been done by one. It was said, too, that some of the schools were imperfectly manned and equipped. These and some other shortcomings were clearly remediable, but some people ignorantly charged them to the system itself. It was no small thing in their favor that the prospective Normal School term tended to prevent the Modelite from settling down on his oars and stagnating at the level at which he entered the profession. A month at the Normal after a year's actual

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teaching and managing a school, is richer in professional improvement than two months without any background of experience.

The foregoing are some of the arguments advanced by those who hold that the combined county Model and Normal School method is not only easier financially, or, as it is sometimes put, "easier for the poor man's child," but also, and of more importance, is actually a much more efficient system of teacher-training on the whole than the other one. Those who favor the third—i. e., the single Normal School term system—have to admit that the double training, with an interval for actual practice, will yield a higher degree of proficiency for those who take it, but they claim that, in consideration of the number who drop out before completing the course, it will raise the level of the average to compel all to go to the Normal School at the start.

The alternative of abolishing the county Model Schools, or of restoring them under the county boards, with the improvements that twenty-five years' experience of them has suggested, is a very important question, and of the highest importance to the rural and agricultural communities. We invite a discussion of this subject in "The Farmer's Advocate," for the reason that no other subject is of greater importance to the future of agriculture than the education of those who will in years to come conduct our farms and occupy our farm homes. It is vital, for it will largely determine the success and satisfaction of farm life, and whether or not rural population will continue to be abnormally drained into the towns and cities.

For the Farmer's Interest.

I think it is a good thing that the publishers of "The Farmer's Advocate" have a farm of their own, which enables them to know more of the obstacles which confront the farmer than would otherwise be possible, and I hope "The Farmer's Advocate" will long continue to fight for farming interests, and not party politics, as the farmers do. All we accomplish is to kill one another's vote, while the man who works for "money interests" chucles to himself and carries the day at the farmer's expense.

GORDON MACGREGOR,
Northumberland Co., Ont.

Build Solidly.

We were much impressed by this sentence in a prominent American contemporary: "We, have too long been jerry-builders on the American farm—borrowing that term from our English cousins, who use it to deride the builders of flimsy structures." Perhaps the indictment does not apply with equal force to Canadian practice, but is there not a measure of application in it for many of us? Farm improvements should be solid, enduring, serviceable structures, which, when completed, may be entered on the ledger at actual cost as permanent assets. It is poor satisfaction to put good money into flimsy construction, only to find, after a few years, that the buildings do not serve their purpose adequately, or are falling to pieces and must be repaired, rearranged, or constructed anew. There is no economy in that, and yet economy is the plea familiarly advanced to justify cheap construction. Don't build structures with which you are bound never to be content. Build as though you had faith in your business. Of course, sometimes one is so cramped financially that he has to pare down the cost of urgently-needed improvements, but, as a rule, it is better to make shift without certain facilities until he can afford good ones.

One proviso: Before putting money into expensive permanent improvements, be sure you have carefully considered not only present, but future needs. For example, an implement shed that will hold all the machinery you now have may be quite insufficient to accommodate conveniently the large new ones you keep adding from time to time. A silo that would suffice for your present stock may be too small to serve the larger stock which corn silage will enable you to carry. Great care should be exercised in planning a layout of farm buildings.

In brief, we would say, while regarding prudently the state of your finances and credit, make it a point to do well everything undertaken. Plan carefully and look ahead. Place each gate or building not for to-day, but for the future. If means will not permit heavy outlay, erect buildings that can be subsequently extended without marring the plan. If the silo cannot be roofed, build it this year and roof it later. Consider your circumstances always, but don't put good money into structures that will not satisfy you when completed. Build solidly and well.

Where the Money Goes.

"Since the Confederation of Canada, forty-four years ago, the Federal Government has paid out in railway subsidies the sum of \$607,000,000; for military purposes, \$83,000,000; as bounties on the iron and steel industries, \$17,000,000; and on agriculture, \$14,000,000. This can scarcely be credited, but it was made on the floor of the Commons at Ottawa, and may be easily verified.

"Six hundred and seven millions to build great railways which are now owned by private corporations; \$17,000,000 to establish a half-dozen iron and steel industries, which perhaps employ 10,000 men; but \$83,000,000 on our militia.

"Some say the militia is necessary for protection. When has it been essential in the past forty-four years? Untrained men who went to South Africa were as effective, and in some cases proved better soldiers than the trained product; \$14,000,000 for agriculture in forty-four years—16 cents for every dollar spent in preparing for war.

"What would Canada have been to-day, agriculturally, if even \$40,000,000, or half that sum, had been spent in building roads and bridges, in establishing agricultural colleges and libraries, and in other ways making Canada the best country in the world in which to live?"

Our attention was arrested the other day by these startling figures, published editorially in the B. C. Commercial Review. We did not remember ever having seen the totals presented in quite this way before. Impressed with the item, we thought it worth while to verify the statements. Having done so, we find them substantially correct. Archibald Blue, Chief of the Census and Statistics Branch, Ottawa, assures us that the figures of \$17,000,000 for iron and steel bounties, and \$14,000,000 for agriculture, are approximately correct. J. Lambert Payne, Comptroller of Statistics in the Department of Railways and Canals, discusses the question of aid to railways, objecting to the present use of the term subsidies, but conceding that the aid of Federal, Provincial

and municipal aid to railways would probably reach six hundred million dollars. We quote as follows from Mr. Payne's letter:

"The cash subsidies paid by the Dominion since Confederation amount to \$148,217,072. Perhaps I should not have said "cash subsidies." That amount covers the aid given in cash, some of which was in the form of loans. In addition, however, the Dominion has given 32,004,486 acres of land, and has provided guarantees to the amount of \$52,439,865. Government is also building the Eastern section of the Grand Trunk Pacific, on which the expenditure up to 31st December last was \$110,679,297. Some writers have thought it fair to add to these sums the \$95,000,000 spent on Government railways.

"It is quite impracticable to state in dollars and cents what has been the contribution of the Dominion Government toward railway construction, since a definite value cannot be assigned to either land grants or guarantees; but I have no doubt that a fair estimate of all the forms of aid since Confederation would reach \$600,000,000.

"The various Provinces have given cash aid to the extent of \$35,919,360, while municipalities have given \$18,042,824.

"I always regard railway subsidies as something definite, and it is a popular error in that regard to speak of all the forms of aid as cash contributions. I have given you the facts, however."

HORSES.

In breeding light horses, avoid all heavy, clumsy, ill-bred, rough, cold-blooded mares, and breed to produce bone, muscle, sinew, conformation and energy.

The value of the light horse on the farm cannot be entirely estimated by the work he does. Speed in driving is a great consideration, and the recreation afforded the family by having at their disposal a good driving horse cannot be calculated, as it is of more than money value.

Still a Place for the Light Horse.

A writer in "The Farmer's Advocate and Home Journal," Winnipeg, Man., states that never was there an opening in the horse trade such as there is for sound light-horse breeding in the Canadian West at the present time. If the opening is good there, it should be equally good in Eastern Canada, for, as has been the case in heavy-horse breeding, can we not expect a market for some of our light horses in the West, and the remainder will find a ready sale to the local trade. While the time for almost incredible prices for the stylish horse for city and town use has to a great extent passed into history, there is still a demand for these animals, despite the encroaching of the motor car. As stated by the writer, most farmers in the Prairie Provinces are fairly well to do, and able to keep a good driving horse. What is the case there is true in perhaps greater degree in the East.

What kind of horse is necessary? The Western writer favors such weight and speed as will make an average of eight miles per hour where the roads are somewhat heavy. A horse, to do this, would not need to approach the pony class, but would require to be a big, strong animal, with a generous amount of staying power, and in the breeding of such, stallions combining size and speed are necessary. What is there at hand to improve the present type of light horse? We have the Hackney, Thoroughbred, Standard-bred, Coach and Morgan blood. The writer referred to does not state a definite plan to follow, but he rightfully condemns the practice of intermingling the blood of the different breeds, and urges that each district stick closely to one breed. Cross-breeding is just as detrimental in the breeding of light horses as in that of the heavy horse, and should be discouraged. The weight proposed was 1,100 pounds, which insures ability to carry a reasonable load at a fair pace, regardless of the state of the roads.

The market for heavy horses the past few years has been so good that most farmers have entirely disregarded the possibilities of the light-horse industry. Many times a light mare has been bred to a heavy horse, the resulting offspring being neither a drafter nor a suitable road horse, and generally a misfit. This is a mistake. Light mares suited, when properly mated with a stallion of one of the light breeds, to the production of high-class road horses, should never be crossed with a draft stallion, no more than a draft mare should be bred to a Thoroughbred or Hackney sire.

While not advocating the wholesale production of light horses on the farms, we believe that, where one or two light mares are kept for the driving and lighter and faster work on the farm and on the road, they can be at the same time

LIVE STOCK.

Prizes for Breeding. II.

Text of an address given by Prof. H. S. Arkell, B.S.A., at a meeting of the Eastern Ontario Fair Association in Ottawa recently.

If our present criterion, in judging a sire, were absolutely or even proportionately dependable, do you think the market returns would continue to report such a scarcity of first-class geldings? If dairy bulls proved as successful sires as their ratings in the show-ring would suggest that they might be, would the average production of our grade dairy cows hover so closely about the 3,000 pounds a year mark, as is indicated on the authority of speakers at our Eastern Ontario Dairymen's Convention? Three thousand four hundred pounds of milk a year is nothing to be particularly proud of. This breeding problem of ours is pretty nearly the despair of college professors, and, what is worse, the fact that it remains unsolved is keeping dollars and cents out of the pockets of our people.

It would be untrue to state that it would be unfortunate for the impression to be entertained that prizewinners in the show-ring have not proven of real value for breeding purposes. Instance after instance could be given of prizewinning animals being the parents of offspring as well or better endowed than themselves to compete for show-ring honors. The record of the deservedly famous Clydesdale stallion MacQueen is a case in point. In his youth he was a great show horse, and it need occasion no jealousy for me to say that, as a successful breeding sire, he has had as yet few equals in Canada. It would be unfair to do other than acknowledge frankly and freely the large contribution made by leading prizewinners in

115 daughters in the Advanced Registry. He was not a show-yard possibility, and, so far as I am aware, was never shown. Paul Beets De Kol was the sire of about 100 daughters in the Advanced Registry, and was never shown. De Kol Burke was the sire of three daughters in the 30-pound list. He is said to have been a regular buffalo.

Take the Clydesdale stallion Cedric, by Prince of Wales. He was only a fair individual, but, as a sire, in the language of the street, had everything trimmed in the United States.

Take imported Sain, a handsome horse, well bred, but without speed. He is one of the best Thoroughbred sires in the stud to-day.

Take Salvator, the fastest record horse which has ever run on the American turf. He was a practical failure as a sire, although at service in one of the best and largest studs in the United States.

Take the record of the Ayrshire cows which have qualified to date in the Canadian Record of Performance. Of the 187 cows which have qualified in all classes, about 50 have been winners of prizes at some exhibition. In the mature class, 24 cows produced 10,000 pounds milk or over; two of these were winners. In the four-year-old class, 10 cows produced 9,000 pounds milk or over; none of these were prizewinners. In the three-year-old class, there were 16 cows produced 8,000 pounds milk or over; five of these were winners. In the two-year-old class, 34 cows produced 7,000 pounds milk or over; nine of these were prizewinners. Of the eight cows which produced 12,000 pounds milk or over, only one was a prizewinner. Two sweepstakes cows qualified with a narrow margin. In one instance, and in one instance only, has a cow holding the highest record in her class proven to be a prizewinner. This cow qualified in the two-year-old class, and is owned in Prince Edward Island. Of the five

bulls which have qualified, only one was noted as a show bull. In addition to the bulls which have qualified, one noted show-yard bull sired three daughters which have qualified. This bull died at ten years old. Another noted show-yard bull sired three daughters which have qualified, and died at seven years old. Of the ten females descended from these show-yard bulls, not one has made a high record.

But I do not want to make my argument depend wholly on illustrations. These serve however, to bear out our contention that the judgment of the show-ring fails as a criterion of breeding utility. I have heard it reported that two successful breeders and exhibitors of dairy cattle have been led, as the result of their experience, to the conclusion that no prize should ever be awarded to a dairy beast under two years old. They don't pan out according to the rating of the show-ring. Nothing has done so much to shake the confidence in the old standards for dairy cattle as has the performance tests at exhibitions and the Record of Performance and Record of Merit tests extending over longer intervals. Few things are doing so much to bring us back to a business basis in estimating as breeders and producers, the varying utility value of different individuals.

(To be continued.)

Bacon Curing Outlook.

"The general outlook in pig-breeding and bacon-curing in the United Kingdom is very hopeful," says L. M. Douglas, in the Highland and Agricultural Society Transactions for 1911, "and there seems reason to suppose that the cloud which has fallen on these two industries is likely now to be lifted, and that the future will have more prosperous times in store for those agriculturists who devote themselves to the breeding and feeding of pigs. No reliance can be placed upon supplies being restored from the United States, or, for that matter, from Canada, and these two great sources may be looked upon as slowly sinking into insignificance. In Denmark, the supply of pigs does not increase in proportion to the great demands from the United Kingdom, which is

profitably used as breeders to produce horses for the trade made possible by the increased use of drivers on the farms and the demand for sound, serviceable delivery horses and drivers which still exists in cities and towns. Undoubtedly, the best type of horse for the farmer to breed is the heavy draft animal, but conditions are such on many farms that the driving mare, or team of them, as the case may be, could be made bring in larger profits by being regularly bred to a stallion of one of the lighter breeds, and one which, by his conformation and quality, gives indications of being able to produce desirable roadsters.

Where Speed Counts.

We like light, quick-moving horses for drilling, harrowing, mowing, raking, binding, weeding, etc. The quick movement gives the machines a certain amount of surplus energy which causes them to do better work than when moving slowly. Our drill men want the quickest-moving team on the farm—one that will pull on the reins and move at command. A quickly-moved harrow will do much better work in making a seed-bed than one that moves slowly. A concrete and pertinent fact came to our notice regarding harrowing. A certain farmer always seemed to have better crops from start to finish than his neighbors, apparently under similar natural conditions. The seed would come up evenly and quickly, and seemed to race to maturity. Being curious to know his methods of seeding, we called on him one day just as he was preparing the seed-bed for a ten-acre plot of fall wheat. He was hitching to the harrows for a final stroke or two. His quickest-moving light team was hitched to a reduced set of harrows that would not lug the team. The team was started off full trot, and the trotting was kept up until a stroke of the harrow had been given lengthwise and crosswise. After drilling, another trotting stroke of the harrows made a veritable garden of the field. This man said: "I would keep a light team on the farm if for no other purpose than to finish my seed-beds." Light horses are better fitted for such work, and pay much better than heavy horses at similar light work which requires speed. This argument, advanced by J. E. Frith, in "The Farmer's Advocate and Home Journal," Winnipeg, serves to show that a light team can be economically used on the farm. While trotting the horses in harrowing will produce a finer seed-bed, we believe that light horses could be induced to walk fast enough to produce the desired effect, and certainly much faster than the drafters. For light, speedy work, most farmers can find a place for the right type of light horse, and the point of speed in preparing a seed-bed is worth testing, if for no other reason than the saving of time so valuable during the seeding.

Horses' Teeth.

I would like to know the number of back teeth a horse has, and the name of each tooth, and at what age it is shed. E. L.

Ans.—The back teeth of a horse, like any other back teeth, are called molars. The adult male animal has 40 teeth, classified as follows: 12 incisors, 4 canine or bridle teeth, and 24 molars. The female usually has only 36, the canine teeth being absent. The molars are arranged in four rows, one on each side of the jaw, and are numbered 1st, 2nd, 3rd, 4th, 5th and 6th, from before backwards. At birth the colt sometimes has four temporary incisors, the central pair in each jaw, but usually these do not appear until about 14 days, the laterals at 9 weeks, and the corners at 9 months. He always has 12 molars at birth, Nos. 1, 2 and 3 in each row. These are all of the temporary molars. At one year old, the first permanent molar (which is No. 4) should be well up and in wear; at two years, the second (No. 5) should be present. At three years Nos. 1 and 2 (temporary) should be shed and replaced by permanent ones which should be well up, and at four years No. 3 (temporary) should be shed and replaced by a permanent one, and No. 6 should be seen well up in wear. At four years of age a colt should have a full set of permanent molars. From about nine months of age until about 2½ years no great change is noticed in the incisors. Between this age and three years the central temporary teeth are replaced by permanent ones; between 3½ and 4 years the laterals are shed and replaced; and between 4½ and 5 years the corner incisors are shed and permanent ones take their place. Hence, a horse should have a full mouth at five years of age.



Prince Ivory [12442]. First-prize yearling and champion Clydesdale stallion in Canadian-bred class at Guelph and Ottawa Winter Fairs. Bred and exhibited by Smith & Richardson, Columbus, Ont. Sire Black Ivory (imp.), dam Fashion Bell (imp.).

the show-ring toward the improvement of Canadian live stock. But even in the face of this, I still maintain, and I know that many leading breeders support me in the opinion, that the present show-ring standard is not a reliable criterion of breeding utility, and does not do justice to the individuals that are really responsible for the success that is steadily being achieved.

When a boy, I visited a Shorthorn herd out of which many noted prizewinners had appeared. What sort of cows, think you, formed the basis of this herd? According to our standard, they ought to have been models of beef form. They were anything but that. The matrons that rear big, lusty, robust calves can't afford the finish and the style that are to be expected in a two-year-old bullock. These cows were big, roomy, wide-hipped, sparely-fleshed individuals, and the udders that they carried showed that they were of the work-a-day sort. That bunch of cattle gave me the best object-lesson in breeding that I have ever had.

It is just here where, in my opinion, the present show-yard standard falls down. It seems to me a farce to judge breeding stock by practically the same standard according to which judgment is passed on the market classes. To illustrate how far the test of performance and of breeding ability is apart from the awards of the show-ring, I think I can give you a few illuminating illustrations.

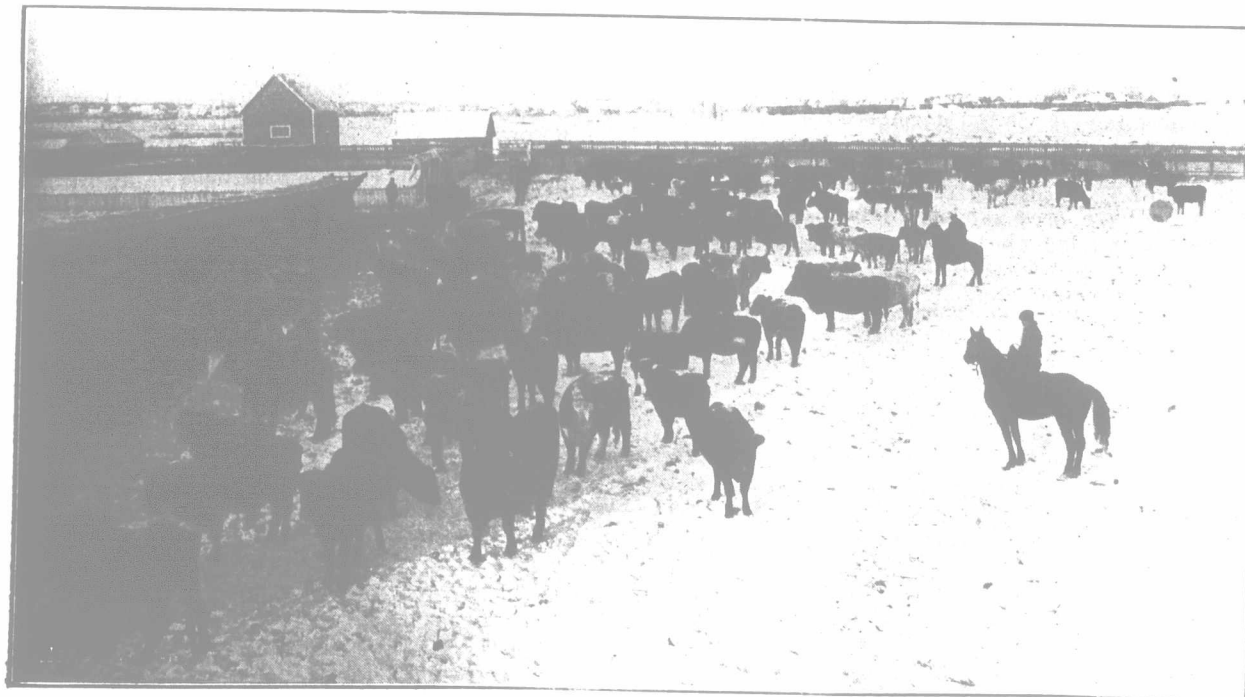
Take the record of three famous Holstein bulls: Hengervold De Kol, one of the most remarkable sires known among dairy breeds, was the sire of

the principal market for Danish produce, and it would therefore seem that the limit of production in that country has been reached. The future supplies, therefore, must be to a large extent grown in the United Kingdom, and this would seem to be not impossible of realization, when it is considered that feeding material for pigs is likely, at least during the present year, to be more plentiful than it has ever been before."

Alberta Rack Feeding.

The accompanying illustration affords a bird's-eye view of a system of cattle-feeding pursued on an extensive scale at Lacombe, in Alberta. For particulars, "The Farmer's Advocate" is indebted to A. Gilmour, during a recent visit to Ontario. He has had some fifteen years' experience in feeding under Western conditions. One thousand acres of land are devoted to the enterprise, some of it used for summer grazing and some under cultivation, in addition to the use of some ranch land. Adjoining the town, there are about 286 acres, and the yards proper, where the winter feeding is done, cover from ten to twenty acres. Counting the two sides, there are about 1,500 feet of rack space, accommodating nicely about 300 head. In summer, on an average, from 500 to 1,000 head of cattle are grazed, and as they are finished, in summer or winter, are sold off. The racks are V-shaped, about four feet clear of the ground, with the space beneath boarded up tight to form a draft-proof wind-break. Cold winds blowing through cracks on the joints of the legs are found to stiffen the animals and cause freezing. The slats of the racks are inch stuff, and spaced three, three and a half to four inches, according to the size of the cattle. They are supposed just to be able to insert their tongues. This spacing tends to prevent waste of hay. This season the cattle have been fed natural hay, which costs about \$7 per ton, delivered at the yards, with oat sheaves, costing from 1½ to 2 cents per sheaf, delivered. No other grain is used, as a rule, and the cattle finish and kill out well. If required, there are large quantities of frozen wheat available, and also barley. At the time the photograph was taken there were about 200 in the yards. The cattle are picked up from farmers throughout the country during summer and fall at from 3 to 3½ cents per pound, and, when finished, have been selling at about 4½ cents, mostly cows and heifers. Lots of such stock have been sold averaging 1,200 pounds in weight. Large numbers of hogs are fed in the lots, following the cattle and picking up the undigested oat grain. The hay is eaten up very clean, but there is more or less waste of straw, which is tramped into the manure and goes on the land being cropped. The cattle have no other shelter than what appears in the engraving, and the snow being dry, is not troublesome. Calves are occasionally dropped in these yards, but usually come along all right. They are vealed at four or five weeks old, and the dams finished off with the rest. Some trouble is experienced from wet teats freezing. After the calves are weaned, the cows may be put into a big "squeezer," and milked out once.

That cattle will finish off successfully under such conditions, is a fact commended to Eastern feeders who have thought basement stables necessary for fattening cattle. While some shelter is necessary in the East, evidence accumulates that well-bedded sheds, open part or all the time to the south side, are fully as good as and more economical than stone basements. The East is indebted to the West for some suggestive object-lessons in cattle-fattening methods.



Open-air cattle feeding at Lacombe, Alta.

Feeding the Pregnant Ewes.

The in-lamb ewe, like any pregnant animal, must be handled with a reasonable amount of care, and the fact that she is pregnant demands that she get sufficient and proper feed to aid in the development of the growing foetus and to prepare her for the ordeal of yearning, and at the same time stimulate her mammary organs into increased activity, insuring that there be an ample quantity of milk secreted for the development of the youngsters after birth. High prices of hay and grain make economic feeding a difficult proposition, and, for best results, enough feed must be given to insure strong, healthy lambs at birth, and a supply of food to keep them thriving. Plenty of dry food is absolutely essential, and good clover hay is one of the best. Pea straw, especially if it is flail-threshed, is a good feed, and with hay valued so high as it is at present, and where a few peas have been grown the past summer, good returns from the extra labor would follow the practice of flailing them, so as to have the straw in good condition for the sheep. The few peas left in the straw will aid materially in keeping the ewes in good flesh.

Many writers decry turnips as a winter feed for sheep, but, if used judiciously, few more profitable feeds are produced on the farm. If fed exclusively, or almost so, they tend to produce an abnormal, flabby growth of the foetus, causing difficult parturition and weak lambs; but, fed in moderation, in conjunction with an abundance of dry feed, they are of inestimable value to the breeding ewes. Some claim they contain too much water, but it must be remembered that grass, nature's most luscious, palatable and succulent stock food contains upwards of 80 per cent. of this material, and feeders and stock-tonic manufacturers have exhausted their ingenuity, and still no equal of pasture grass as a stock food has been found. There is, however, a danger that, where turnips are fed in large quantity, the sheep may incorporate more water into her system than is in the best interests of economy in winter feeding. Water is a difficult substance to heat, and, in order to bring it up to body temperature, much of the energy produced by the food is used. It is seen that turnips or roots of any kind must be fed in moderation. There is an effect caused by the succulency which they add to the ration which makes roots almost imperative as a part of the winter feed of in-lamb ewes. After yearning, the quantity of roots should be increased, as they aid in stimulating milk production.

Grain fed in small quantities, while not always absolutely necessary, is generally advisable. Oats are greatly relished, and make a good food for our pregnant ewes. Like the roots, the grain ration should be increased after lambing.

Water is necessary at all times. It is a mistake to suppose that sheep do not require this essential to all successful animal husbandry. In-lamb ewes, or those suckling lambs, are in special need of pure water at all times. The more roots the sheep get, the less water they will drink.

Exercise has been reiterated time and again as necessary for pregnant animals. Sheep are no exception. Give them as much outdoor exercise as possible. The trouble at yearning time varies directly as the exercise and general care of the flock during the ewe's pregnancy are good or otherwise.

The United States Department of Agriculture estimated the value of live stock per head in that country on January 1st, 1910, as: Horses, \$108.19; mules, \$119.84; milch cows, \$35.79; other cattle, \$19.41; sheep, \$4.08; swine, \$9.14.

Heavy Root Feeding.

James B. Hendrick, B.Sc., F.I.C., Consulting Chemist to the Highland and Agricultural Society, says: "The production of beef is one of the main agricultural industries of the Aberdeen district, and that beef has obtained a considerable reputation. The chief foods used in producing it are turnips and straw. Along with these, more concentrated foods, such as bruised oats and barley, and various oil cakes, are used. The proportion of concentrated food used is not very great. The ordinary Aberdeen feeder does not use more than 4 to 6 pounds per day of cake and corn, even when finishing a beast, and often uses less. On the other hand, he uses a very heavy ration of turnips. From 100 to 120 pounds per day is an ordinary allowance for a beast of 8 to 10 cwt. live weight. The typical North-Eastern cattle-feeder, farmer and cattleman has an extraordinary belief in the efficacy of turnips in feeding cattle. If you tell him turnips contain 90 per cent. of water, he confidently replies, 'But it is far better water than is in the burn.' Many analyses of the turnips and Swedes grown in the Aberdeen district have been made by myself and others. So far as analytical results go, Aberdeen turnips are not found to differ greatly from those grown in other districts, numerous series of analyses of which have been published. Despite the widespread belief that Aberdeen turnips are better than those grown elsewhere, it is not found on analysis that they contain any less water on the average. Like others, they contain about 90 per cent. of water, or, perhaps, in the case of yellow turnips, a little more. Feeding cattle readily eat the great quantities of turnips mentioned above, consequently they consume far more water than is necessary for their life processes. There are very numerous experiments on record showing the weights and composition of the faeces and urine of cattle under what might be called normal conditions as to consumption of water; that is, where the animals were consuming only the amount of water necessary for healthy existence, and were not consuming excessive quantities in watery food. These experiments show that, under such conditions the weight of the urine is not more than half the weight of the faeces. On the other hand, as the above experiments show, where heavy rations of roots are fed, the urine may weigh more than twice as much as the faeces. When the urine is abundant, it is weak, and only a small part of it can be kept in the manure. It is impossible to use sufficient litter to absorb 60 or 80 pounds of urine per beast per day; and even if it were absorbed, it contains such a low percentage of nitrogen and potash that it would diminish and not increase the percentages of these in the resulting manure, for straw itself contains higher percentages of nitrogen and potash than such weak urine. On the other hand, when an animal passes only 10 or 15 pounds of urine per day, it is comparatively easy to retain the whole or the greater part of it in the dungheap, and, as it is comparatively rich in nitrogen and potash, it makes comparatively rich dung. Such urine, when absorbed by the straw, raises the percentage of nitrogen and potash, since it contains higher percentages of these valuable constituents than does the straw."

Do Not Part with the Tried Sire.

The old bull has the advantage of having proven his worth. Think the matter over before deciding to replace him, and after weighing the circumstances carefully decide to keep him another year, rather than trust the work of herd improvement to a young, untried bull which may undo the old bull's years of good service. Many an old sire has been turned away to the butcher's block years before he should have been, and many a young sire has gone into service at the head of the herd, which, in the best interests of that herd, should have gone to the block in his early life. A sire which has been tried, not one year, but several years, and has by his get proven the right to his position, is a solid rock upon which to build the herd. There is no better corner-stone for the foundation, and this surrounded by a female herd selected with discrimination and good judgment, culled and weeded as quality and circumstances warrant, cannot fail, under proper conditions of feeding and management, to produce, maintain and improve the class of animals most in demand. If your bull has proved satisfactory during his two, three or four years in service, and he is still active and a sure getter of the right type of stock, keep him, and don't part with him until you are quite sure that he has outlived his usefulness. Buying a young sire is somewhat of a lottery. The best of conformation, backed up by the strongest of pedigreed ancestry often fails to show its expected effect in the offspring. True, such conditions are more likely to give good results than when an indifferently-bred common sire is used, but the point is that no one can accurately estimate the value of a bull as a breeder until he is tried; and if he proves satisfactory, he is invaluable, and should be retained as long as possible at the head of the herd.

A Question in Pig Feeding.

Which is the more profitable, raising pigs to a weight of 100 or 125 pounds, or to a weight of 200 pounds and over? E. G.

Ans.—This is a question which requires some thought. Experiments have shown that pigs up to 50 pounds in weight require about 300 pounds of feed to make 100 pounds gain. Pigs weighing from 50 to 100 pounds require approximately 400 pounds of feed to make 100 pounds of gain, those weighing from 100 to 150 pounds about 440 pounds of feed, and those weighing from 150 to 200 pounds, about 480 pounds of feed to the 100 pounds gain. Thus it is seen that the older the pig, the more feed required to make a pound of animal increase. The flesh is put on young pigs more economically than on older pigs. This, however, has not solved the problem of which really costs the more—the first or second 100 pounds. We must reckon the pig as costing something at birth. There is service fees or expense of keeping the sire; also expense and risk in keeping the pregnant sow, depreciation in the value of the sow, equipment, etc., so that there is a cost in producing the pig. Wallace's Farmer estimates, in answering a similar question, that this cost is \$2.00 per head. While this may be a trifle high, it is not very excessive. The average weight of a pig at birth is about three pounds. As the pig gets his nourishment up to, say, nearly 50 pounds in weight from the sow, this is the cheapest portion of his gain. It requires about 100 pounds of feed to put on this first 50 pounds of flesh, which, at present prices, would cost about \$1.50. The second 50 pounds would cost about \$3.00, making the total cost of the first 100 pounds \$6.50. Where pasture grass forms a part of the ration, these gains would be made a little cheaper, which would bring the cost down to probably \$6.00. The second hundred pounds would cost about \$6.90. Green food would also reduce this, so, at feed prices which obtain this winter, there is little difference in the actual cost of the pork in the first and second hundred pounds. If feed were lower in price, the difference would be in favor of the second hundred weight, but when it is high, as it is now, the first hundred has a slight advantage. Market requirements must also be considered. Our bacon-hog trade demands a pig weighing from 160 to 200 pounds.

THE FARM.

Hairy Vetch as a Crop.

- I would like to know about sand or hairy vetch. Once seeded, does it stay in the ground, or do you have to seed every year?
- Would it be likely to get a catch on poor, run-out land?
- If sown in the spring, would it be ready to cut the same summer, or, say, pasture?
- Does it make good hay?
- Could it be cut twice in one year? Is it hard to cure?
- Would it be better to sow with some other crop or alone, and how much seed per acre if sown alone?
- Is it a good crop to clean the land, and is it better to use for pasture or to clean the land?

R. JAS. McR.

Ans.—1. The plants of the hairy vetches die after they have produced seed. If they are sown in the spring, they produce seed the same year, but if sown in the autumn they do not produce seed until the year following.

2.—A very good catch of hairy vetches might be obtained on a poor quality of soil, but the crop would likely be light.

3. When sown in the spring, hairy vetches produce a crop the same year, but the crop is not apt to be as large from the spring as from the autumn seeding.

4. Hairy vetches make very good hay.

5. There is not much of a second growth after hay is made from the first cutting. If the weather conditions are favorable, however, there is sometimes enough for pasture.

Hairy vetches are usually sown alone, although they may be mixed with grain for fodder purposes. They are sometimes sown with rye for the production of seed. The rye tends to keep the vines from the ground, and enables the vetches to produce more seed. The usual amount of hairy vetches to sow per acre is from 1 to 1½ bushels.

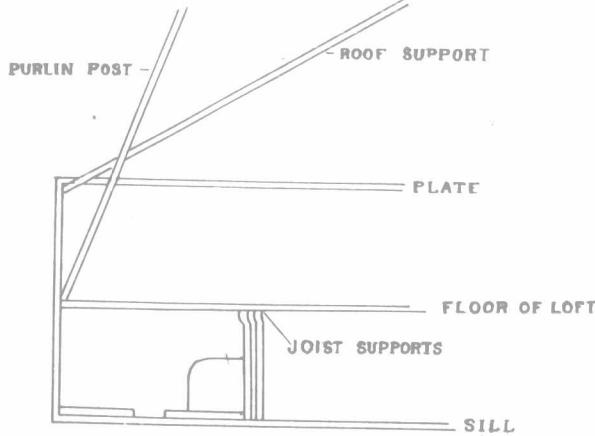
7. I do not consider hairy vetches a very good crop for cleaning the land. It is a very good pasture crop. One of the greatest drawbacks in the growing of hairy vetches, however, is the cost of seed. The seed is mostly imported from Europe and frequently costs \$5.00 or more per bushel.

C. A. ZAVITZ.

Another Plank Frame Barn.

Editor "The Farmer's Advocate":

In "The Farmer's Advocate" of December 21st there is a question regarding plank-frame barns which I think I can answer, as we have just finished one similar to that which W. M. W. wishes to build, i. e., a plank frame, with truss roof, as described in Mr. Shawver's book, "Plank-frame Barn Construction," because, if it were a balloon frame, with self-supporting roof, the stables, etc., would make no difference. Our barn is 36 x 66 x 16, with gambrel roof, the purline plate being 14 feet above main plate. It has barn floor on level with cow stable on one side, and horse stable and granary on other side of barn floor. The purline post starts from floor of loft, instead of from sill, thus:



If the floor joists are properly secured in walls, and strongly spliced, the walls will be much stiffer and stronger than if the purline post started from the sill. When we found we should have to build, I wrote to you, asking if you could give me the address of someone who could draw out the plans and specifications we needed. You replied that my contractor could do that, and I have since seen the same reply to another inquirer. You forget that in most localities the plank-frame barn is unknown, at least so far as the truss frame is concerned. I found, when I spoke to builders about it, that the only form of plank frame they had any idea of was the balloon frame, though one contractor wanted to know if

first heavy wind, or that the floor would give way when a load was put on it; and on that account he made it stronger and used more material than necessary. The cost of the barn and the silo, which is connected with it, was about \$1,500. Had we got the detailed specifications we wanted, it would have saved us at least \$100.

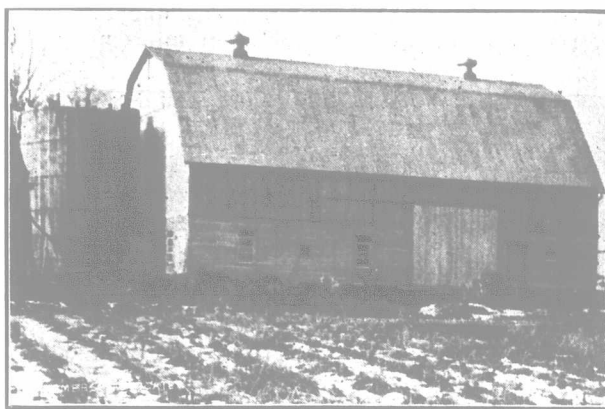
The barn has cement foundations and cement floors throughout. The first parts erected were the stanchion posts in the cow stable, of which there are two rows running the length of the stable. The posts are made of three 2 x 4s, with the center one projecting 6 inches above the others, and on the shoulders thus formed are placed two 2 x 6 planks, which support the floor joists. As the cows' heads are turned in, the supports are 10 feet apart, leaving a span of 13 feet to the outer wall, or about 12 feet in the clear. The end of the joist is supported by a 4 x 8 stud, one plank being cut 8 inches shorter than the other to form a shoulder to receive the joist, which is spiked to the other one. The joists are made of two 14-ft. and one 12-ft. 8-in. planks, giving laps of two feet at the joints which come on the supports, these laps being securely spiked together. At the center of the stable, where the interior bent comes, the joist is inserted between the planks which form the post, another piece put under the end, also between the planks, and the whole spiked together. An 8-inch plank was placed on top of the joists between the posts, and when the stable was sheathed inside and out, the frame was tied together beyond possibility of spreading. This lower part was sheathed and the loft floor laid before the roof was touched, and very little scaffolding was required, the work being done from a movable tower and ladders. I forgot the end bent, which puzzled us more than the others, as Shawver's book gave few details about it. It is formed like an M, the different members being fastened to feet on the plate. If I were building again, I should carry the posts to the loft floor, using three 2 x 6 ties, instead of the box plate, the center tie passing between the planks.

We were advised to stand our cows heads out, but have placed them heads in for convenience in feeding. The silo is placed at the center of the end of the barn, and is connected with it by a small house which opens into the feed alley, and at the end of the other alley a large sliding door opens onto the barn floor. A passage runs from one side to the other, with gates to prevent cattle getting through. There are doors to the barn floor from each aisle, making three doors at each end of the stable. The horse stable has three single stalls and a double one. The manger of the double stall can be removed, and the partition between it and the last single stall swung round at right angles, making a large box stall. The roof is corrugated steel, with eavestroughs and water-pipes, and we intend to connect the pipes with the ground by wire rods. The silo is roofed and covered with a prepared roofing, and a lightning-rod placed on it. We are not certain whether the rod should be connected with the silo rods or insulated from them. Can you advise us? I am sending you photos of the barn in course of construction and complete.

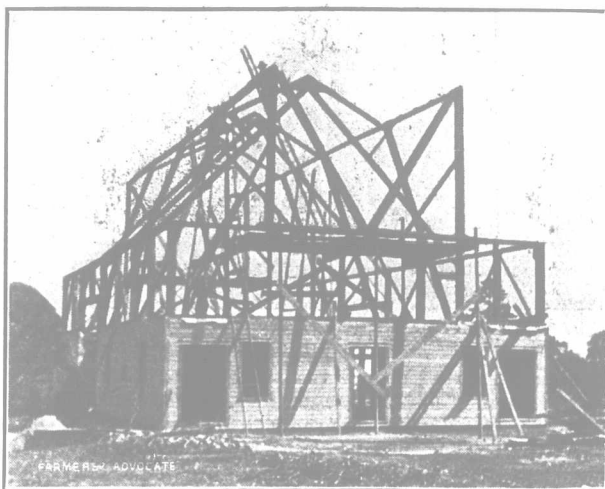
Prescott Co., Ont.

C. W. BEAVEN.

[Note.—Our apologies are respectfully tendered and thanks expressed. We receive so many inquiries which could be better answered by conference with a local contractor that we sometimes get tired of the importunity, and answer briefly. In the case of plank-frame construction, however, we have recently learned by personal experience that many carpenters are deplorably uninformed, seeming actually less able to grasp the idea than many farmers possessing a mere "speaking acquaintance" with carpenter's tools. We have published much information on plank-frame construction, but it is necessary to repeat frequently for the benefit of new readers, as well as old ones newly interested in the subject. This letter by Mr. Beaven, and others recently received, should prove very helpful. Connect your lightning-rod with all the silo hoops.—Editor.]



Barn of C. W. Beaven, Grenville Co., Ont.



Frame of barn built by C. W. Beaven, Grenville Co., Ont.

I intended to build in elevator style—i. e., planks laid flat one on top of the other, making a solid wall. W. M. W.'s difficulty shows it is about the same in his locality. I had to draw out rough plans of what I wanted, and trust to my carpenter for the details. He has made a good job of it, but, having no experience in this form of construction, he had to feel his way, and took much more time than he otherwise would have done. Also, we had a number of visitors, as the building was quite a curiosity while going up, and most of them predicted that it would blow over in the

Soaked Shingles in Crude Petroleum.

Editor "The Farmer's Advocate":

I notice an inquiry from E. G. M., in your issue of the 18th January, about the liming of cedar shingles. Twenty-four years ago I shingled a barn with cedar shingles, first soaking the bunches in a tank of crude petroleum, and to-day they are practically as good as ever. We dipped the shingles in a tank without loosening the bunches, leaving them to soak about ten minutes. It does not cost much, one cask doing for 15 M. About 15 years ago I resingled my house, and painted them with fireproof paint, not once only, but every time the house was painted, with the result that this year the roof leaked so badly I had to resingled it. It is needless to say that this time I used the crude oil, which, while it preserves them, also stains them a very good color.

Queen's Co., N. B.

MORRIS SCOVELL.

Improvements on Farm and in Kitchen.

Editor "The Farmer's Advocate":

Some time since, one of our neighbors who has a large dairy, installed milking machines, and I called on him a short time ago to see these new labor-saving devices at work thoroughly and well, and, so far as I was able to observe, without discomfort to the cow, although I understand some cows are fidgety and nervous during the operation. The cow is rather an affectionate animal. Deprived of her calf, she, as a rule, readily gives down her milk to man, and seems, in a measure, to transfer her affections to the hand that milks her. It is one thing, however, to be stroked and petted by human hands, and quite another to have the teats champed by a thing of rubber and pipes, and milked by suction, without the accompanying sound of a reassuring "So, boss." Milking machines have been long on the way—almost as long as washing machines—and if we have reached the perfection mark in either line, there will be great rejoicing, both in the kitchen and in the dairy barn. It is twenty-five or thirty years since I first heard tell of milking machines, and ever since they have been the hopes of inventors and the despair of dairymen, for the milking of a herd of forty or fifty cows is no light task, especially in our day, when women seldom engage in the work and the man laborer on the farm is such an uncertain quantity. Where you find one good man, there will be two dozen no good. And if we have attained to a perfect machine, we have achieved a national blessing, since there are a good many millions of cows in this country waiting twice each day to be milked. The introduction of these machines into a neighborhood by a single dairyman will doubtless be followed by their general use in the community, if they prove satisfactory to the man who has already installed them, for we are all imitators to a much larger degree than we are willing to admit, or than we are conscious of. And it is well that it is so, for most of our neighborhood improvements are imitated by one man a little more enterprising than his fellows making some improvement which the others strive to emulate.

Cows will make more and better milk when tied in light, warm, dry, ventilated quarters, and cleaned, curried and treated kindly, than under other treatment. Under these conditions the cow will give a good account of herself. Dairies with handy, up-to-date quarters and high-test cows are the ones that pay. It is the man that had to wade through manure to reach damp stables, where loud talk and inconvenient ways prevail who complains of a lack of profit. The improvements are not always expensive ones. One farm I saw lately the owner has put on its feet again. He has put in cement floors, with wood cover under the stock, strengthened the old walls, put on new roofs, added more light to stable, also had walks laid to house and barn, repaired fences, and hired reliable help by the year. He is raising draft horses, Holstein cattle, sheep, and Leghorn hens. None of these improvements come so high that they are prohibitive for the common farmer. Last year, as the harvest was about past, I had the opportunity of going to a neighboring county where twenty or thirty years ago agriculture was in a rather backward state. I was more than surprised to see how everything on these farms had taken a change for the better. The spirit of improvement had taken a good grip on the people; everything went to show of the bountiful harvest, which could not be produced on a poor and neglected soil. On almost every farm we passed was a big barn, new, or only built a few years, the majority of barns being painted, all plainly showing thrift in the community, that some enterprising farmer's step forward had been imitated by his neighbor, until the leaven had leavened the whole section. In many places, what had been mere "front yards," cut once or twice a season with a scythe, and quite often providing a run for calves and cattle of all kinds, had progressed into lawns carefully kept in order with a lawnmower, and set with shrubbery, all indicating a spirit of progress befitting big crops, big dairies, and big barns. The changed scene reminded me of an article I once read of Booker Washington, the negro educator, once made touching the wholesome influence upon his race of the good example of a white man. He said: "When the one-suspender negro in the South, driving his one-mule plow, learned that the white man in the North drove a pair of horses to a sulky plow on which he rode in leisurely comfort, he was immediately seized with the ambition to acquire another mule and a sulky plow—an ambition altogether worthy and gratifying."

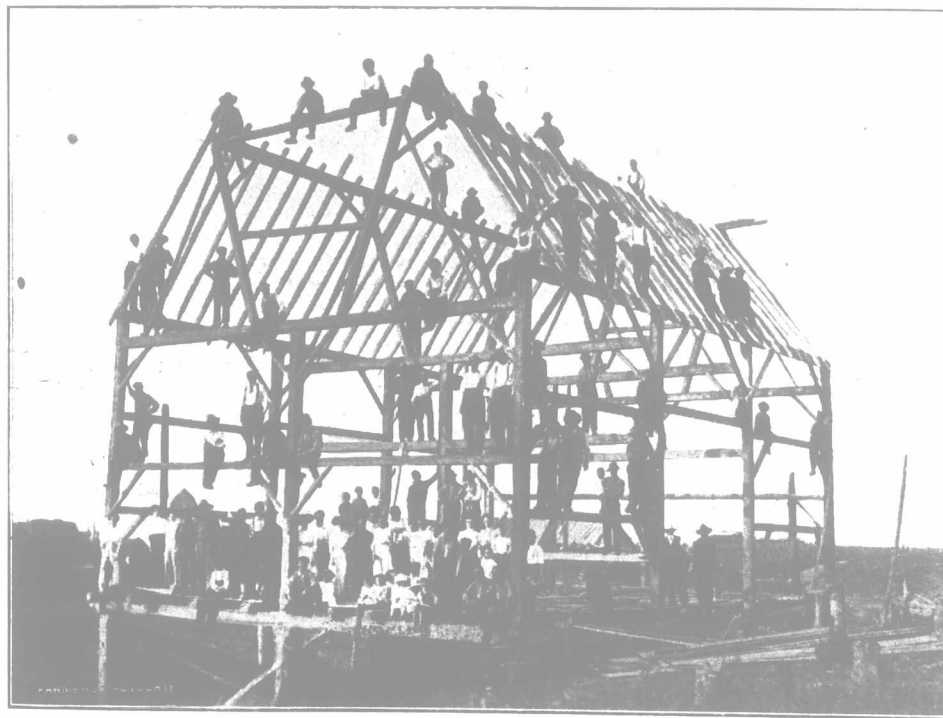
Such is the power of good example in the industrial field. As we were driving along the highway, which, by the way, was the best that modern engineering could devise, and commencing upon the outward manifestations of improvement, my friend was moved to observe, "I wonder how many of these farmers who have laid out a such

money in modern implements still oblige their wives to slave over a washboard and carry skimmed milk from the cellar, and bring water from a well rods from the house?" This observation at once opened up a new phase of the question of improvements. The up-to-date farmer has installed his hay-carrier, the manure carrier and spreader, his gasoline engine, and what not; while, in many farmhouses there is little improvement, if any, of years ago. Many a housewife is obliged to cook three square meals a day, pump water from a deep well convenient to the barn, but remote from the kitchen; to hang up the family wash after the garments had been cleaned upon a washboard, in a yard where they are constantly menaced by calves and pigs; and to use kitchen tools such as were in use one hundred years ago. My friend declared it did her good to see improvements in any direction, but when the effort is all expended upon the things the man uses in the field or barn, and nothing whatever is conceded to the domain of the kitchen, she is disposed to withhold her word of praise.

However, we are improving all along the line. Very many of our neighbors who have passed middle life have thoughtfully provided a low carriage for the convenience of "mother," as many of the great-hearted farmers among my acquaintance style their life-partner; washing machines are being provided in many homes, and inside water supplies are becoming epidemic in this locality. Like the negro-educator's one-suspender negro, we are taking notice, and the thoughtful farmer is determined that his wife and family shall be as comfortable and as well cared for as the wife and daughter of the city gentleman. It is a good rule for every farmer, when he buys a machine to lighten his labor, to look around and see if there is not its counterpart to lessen the burden for his partner in the kitchen. A. B. York Co., Ont.

A New Ontario Raising.

That New Ontario farming communities are developing along lines essentially similar to those of Old Ontario, is apparent to the observant traveler. Mixed husbandry, with clover and fall wheat as features, barns, stock and stables, are all in evidence. It is all quite different from bonanza wheat farming in the West. A very pleasing glimpse of Northern Ontario rural life and development is afforded by the accompanying half-tone reproduction of a barn-raising last July on the farm of J. C. Bogart, ten miles north of



Raising a barn in Temiskaming District.

Barn 35 x 45 feet, on the farm of J. C. Bogart, raised in July, 1911. In dress and appearance of men, women and children, this raising would compare favorably with a similar gathering in Old Ontario.

New Liskeard, in the Temiskaming District. The barn, though not one of the largest in New Ontario, is of respectable size for a new settlement, being 35 feet by 45 feet, with 20-foot posts, a hip-roof, and a stable underneath.

J. C. Bogart has 160 acres of land, having settled here on October 8th, 1908. He has about 25 acres cleared and in to crop, and keeps five head of cattle and two horses. He had about 100 bushels of potatoes planted on fresh-cleared land, which yielded about 60 bushels. His oats yielded about 90 bushels to the acre last year. He has a sawmill that puts out about five hundred thousand feet of lumber last summer, besides building a new house. As our country is so largely a lumber or Northern On-

tario! Those having small means and wanting a start will do well to come north to the land of silver."

Methods for Separating Buckhorn from Red Clover Seed.

The system of dampening cheese-cloth tacked on screen doors or sieves, is only applicable to the treating of small lots, such as farmers would use on their own farms. It would be too slow for commercial purposes. Possibly a man could do a bushel or one and a half bushels in a day. Another method for dealing with small lots is to mix dampened sawdust with infested seed. The buckhorn, having a mucilaginous coat, accumulates the sawdust around it, when separation may be made with sieves.

There are a number of buckhorn machines in use in Ontario, but they are slow, and not a perfect separator by any means. They consist of two rollers covered with a rough felt, which roll outward and carry off the buckhorn over the rolls, while the clover seed drifts on down. The felt soon wears smooth.

I once saw an ingenious mill, made by a farmer near Simcoe, Norfolk Co., but it was slow. However, it did very good work, and was constructed on good principles. There are some sieves, made with long narrow meshes, which make fair separations, as the buckhorn goes through it on its edge. A former resident of Milton, Ont., put such sieves on the market. It may be said that such sieves will not make a complete separation.

T. G. RAYNOR.

[Note.—This letter was received in response to a letter asking Mr. Raynor as to the practicability of cleaning buckhorn from clover seed by placing it upon a dampened cloth and allowing it to dry, when the buckhorn will stick, and the clover seed be removed pure.—Editor.]

Dried Potatoes.

The drying of potatoes is an industry that has been developed in the past five years in Germany, which country grows one-third of the world's potato crop. During the past year, under orders of the United States Secretary of Agriculture, an investigation has been made in Germany of the starch and dried-potato industries, dealing especially with machinery and methods in use. Germany has potato-drying plants with a combined yearly capacity of nearly twenty-five million bushels of potatoes, equal to more than seven per cent. of the average annual potato crop of the United States for the three years ending with 1911.

The two general methods of manufacture are known as the roll system and the drum system.

In the roll system the potatoes are steamed until softened, and then passed between large revolving cylinders which are heated by steam. The potato forms on the roll in a layer, which dries and is scraped off during a revolution of the roll. This product has the appearance of one of our breakfast foods known as "corn flakes," and is used as a general substitute for the fresh potato in the household, in addition to being ground to a flour and mixed with other flours for

breadmaking and in the making of cereal foods. The drum system makes a product at about half the manufacturing cost of the roll system, and, for all purposes other than human food, the drum system is used. It consists, essentially, of an iron shell about two and one-half feet in diameter, and eight times this in length. Through this a heavy current of air is drawn by means of a fan, and the fire gases from a stove feed directly into it, the mixture of heated and cold air being such as to make a temperature of about 600 degrees F. at the entrance. From a cutting machine, chipped potatoes are conveyed to the slowly revolving drum, which is provided with an interior construction that gives the potatoes the maximum exposure to the drying action of the hot air. The drying operation must be done on

rather a large scale, as small drums are not nearly so efficient in proportion to size. The fuel requirements are about 300 pounds of coke, or its equivalent, for one ton of potatoes, and the labor requirements are small. The approximate cost of operation, including fuel, labor, interest on investment, taxes, wear, etc., is \$1.30 per ton of potatoes. Four tons of potatoes yield one ton of dried product. In Germany, most of the product is used as feed for all kinds of animals, having, it is said, about the equivalent value of corn for cattle, horses and swine. It is used, technically, in the manufacture of yeast, alcohol, etc. The product, being partially cooked, is not suitable for the manufacture of starch. One of the large manufacturers of machinery is now trying out a process for making a material that will be suitable for making into finished starch.

It appears that this industry may be applicable to the United States, especially where the question of freight is one of importance, for, as seen above, the weight of product is reduced to one-fourth. It should enable our Western States to utilize the advantages they have for potato-growing, both as a money crop and as a cultivated crop in the rotation to prepare the land for wheat and other grains. Furthermore, the machines could be used for drying sugar-beet pulp, beet leaves, and other similar products, as it is in this way the German beet-sugar factories conserve their pulp, mixing it with a small quantity of molasses for stock feed, a part of which is exported to the United States.

Soil Water Investigation.

An interesting statement on the investigation of water in its relation to soil is made by United States Secretary Wilson, in which he says:

"Several of the formations permeated by the subterranean waters abound in soluble minerals, which are slowly dissolved and either washed out in the springs, to be carried off through surface streams, or swept seaward at depths beneath the surface. Such solvent action of subterranean waters is well known, but in the central plains region the proportion of soluble matter is so large, and so related to other factors that its removal becomes a distinctive geologic agency. As the solution of the rock matter proceeds, the strata are weakened, and from time to time they slump beneath their own weight and that of the superposed deposits in such a manner as to warp the strata, and frequently produce depressions of the surface, when the local run-off following storms accumulates within these depressions, and gradually fills them with silt eroded from the rims and neighboring uplands. So characteristic is this process that the general surface over thousands of square miles is of a distinctive topographic type—coalescing basins and low divides forming an irregular surface, without continuous seaward slopes. The conditions by which this topography was produced have existed for ages; indeed, throughout the greater part of the vast interval since the Cretaceous, and during these ages the progressive slumping in the deep-lying strata, with the subsequent warping of the surface and shifting of local areas of erosion and deposition, have resulted in an immense accumulation of silts and loams forming the soils and sub-soils of the region. Nowhere else in the world, so far as known, are there so extensive accumulations of subaerial deposits as in the central plains, and the accumulation is due primarily to that subterranean movement of the waters which to-day render the silt loams more productive than they would be if watered only by the meagre local rainfall.

Under the modern view of the suborganic and dynamic character of the soils, the chief factor of continuous activity is the circulating soil water, which maintains appropriate texture in the soil body, passes thence into the plants carrying material for growth in solution, and finally returns through transpiration to the condition of aqueous vapor in the atmosphere. Investigations have shown that in productive regions there are two sources for the soil water: (1) rainfall and (2) the store of ground water accumulated from the rainfall of previous years and non-growing seasons. Throughout the greater part of the United States the rainfall of the growing season does not suffice to produce crops, and cropping succeeds only as the growing plants draw on the accumulated store of moisture, which is generally equivalent in quantity to the rainfall of several years; in fact, without this store farming, especially during the dry seasons, would frequently fail, so that it may be viewed as a big factor in the agricultural capital of the country. To this important resource the soil-water investigations have been extended during recent months, with the object of ascertaining (1) the quantity of ground water within reach of capillarity, and (2) the changes in quantity attending settlement and cultivation. Generally, the best indication of the ground water level is afforded by wells and springs, and a census of representative wells and springs in every county

in the United States was undertaken through correspondence. In the country settled for a quarter of a century or more there has been a decided lowering of the ground-water level, with, of course, a corresponding increase in danger of crop loss through drouth. Thus, in Michigan, the mean water-level in 794 wells lowered 2.2 feet during an average period of 88 years; in Minnesota, the average lowering of water in 920 wells was 3.45 feet during 14 years; in Iowa, the lowering in 1,160 wells averaged 3.6 feet in 21 years. The mean rate of lowering of the ground-water level, indicated by the wells in the three States is 0.18 foot per year, or 4.5 feet during a quarter century. The facts brought out by the inquiry serve to emphasize the importance of so improving agriculture as to utilize and conserve on each farm all the water received by it during the year."

The Production of Clover and Timothy Seed.

Speaking at a meeting held in connection with the Eastern Ontario Live-stock and Poultry Show, E. D. Eddy, B.S.A., of the Seed Branch, Ottawa, said, in discussing the production of clover and timothy in the Ottawa Valley, that he believed one of the greatest opportunities the farmers of Eastern Ontario and Quebec have is in the more extensive growing of clover for pasture, hay and seed. What is true of that district is also true of many other portions of the country. Continuing, Mr. Eddy said: Not only is clover one of our most profitable crops, but in conjunction with live stock it has a remarkable influence in increasing the fertility and improving the mechanical condition of the soil, thus making it more productive for all other crops. So great is this influence that some prominent agriculturists have

culcation of air and water, which is very important, especially in heavy soils.

One of the principal reasons why more clover is not grown was given as the high cost of seed, which has caused smaller areas to be seeded, and at a lower rate of seeding. There is, according to Mr. Eddy, no reason why clover seed should not be more extensively produced in the Ottawa Valley, because farmers experimenting in growing it in this district have had good success.

For several years, good crops of first-class clover seed have been grown on the Macdonald College farm, Ste. Anne de Bellevue, Que. This year, 24 acres of red clover were saved for seed after a first cutting of 3½ tons per acre had been removed for hay. The second crop yielded 2,776 pounds of seed, or at the rate of about 2 bushels per acre, which, at 20 cents per pound, is \$555, or \$23 per acre. This seed, a sample of which has been tested at the seed laboratory, is free from weed seeds, and of such high quality that it would be very difficult to secure stock as good from the trade at any price. This record is not an exception, by any means; in fact, the yield this year is considerably lower than the average, although the price is higher. Equally satisfactory results have been secured by private farmers in different parts of Eastern Ontario, and this year, with the encouragement of the Provincial and Federal Governments, quite a large number of farmers have saved clover for seed in Pontiac and some other counties in Quebec.

FARMING MODIFICATIONS NECESSARY TO SUCCESS.

There are several features of farming operations which need to be modified considerably before clover-seed production, or even clover-growing for pasture or hay, will be the success that it might be. In the first place, the crop rotation should be shortened so that the land will be seeded to clover

oftener. Fields bearing the third or even the fourth crop of oats in succession are not likely to respond very well to the seeding of clover, and when they do not the owner often gets discouraged, and thinks that buying expensive slover seed is a waste of money. The trouble is likely not with the soil or climate, but with the management; for clover, perhaps more than any other crop, demands suitable conditions for a start, and one of the conditions is a fairly fertile soil containing plenty of nitrogen and potash. As clover is a nitrogen-gatherer, it is consequently the best possible preparation for a succeeding crop. For this reason, land that is frequently seeded usually responds readily, but that which is seeded only at long intervals is likely to give a poor catch.

The main secret, then, in making sure of a good catch of clover each year is, first, to bring the land into a good condition of fertility by good cultivation and the application of barnyard manure, and then seed frequently. In some districts, excellent results in preparing land for clover have been obtained by sowing other leguminous crops, such as peas and vetches, for the purpose of enriching the soil in nitrogen. On soils that are deficient in available potash, sometimes very beneficial effects are secured from the use of land plaster or gypsum.

Another mistake that is often made is the sowing of insufficient seed. The average rate of seeding in this district is perhaps three or four pounds of clover seed, with about as much timothy seed per acre. This low rate of seeding is almost sure to result in a poor stand of clover, with the next year's crop containing too large a proportion of timothy to make the second growth of clover thick enough for a seed crop. Even when a crop is intended for hay or pasture only, but more especially for seed, it will be found good economy to sow from nine to twelve pounds of clover seed, with four or five pounds of timothy seed per acre.

FACTORS AGAINST PROFITABLE SEED PRODUCTION.

A factor which frequently disqualifies a field of clover for profitable seed production in the Ottawa



A Better Investment.

Prof. Wm. H. Day, speaking at the Dairymen's Convention in Campbellford, declared that reports sent in during 1909 and 1910, showed that the acreage increase of crop on drained soil had been \$11.50 per acre per annum, and the average cost to drain had been only \$25.00.

gone so far as to say that no country where clover cannot be successfully grown can long remain highly productive, except through the very liberal application of fertilizers, which is impracticable on a large scale.

We can appreciate the force of this contention more fully when we consider why it is that clover has such a highly beneficial effect on the soil, and this in a word is explained by the fact that it is a plant-food gatherer, instead of consumer, in so far as the element of soil fertility usually deficient is concerned. The farmer's great problem in soil fertility is to convert the elements of nature, particularly nitrogen, into a form available for plant food. In this work, clover and other leguminous plants are his chief assistants, for they have the power of drawing on the inexhaustible supply of nitrogen in the air, and, through the bacteria in the root tubercles, converting it into nitrates for the use of the growing plant itself and for succeeding crops. The result is that clover not only does not remove nitrogen from the soil, but actually leaves it so much richer in that element that its beneficial effects can be seen in several succeeding crops. Not only does clover increase the store of available nitrogen in the soil, it also makes it more friable, and improves its mechanical condition. The roots penetrate deeply and bring up plant food from the subsoil, and, upon decay, they leave channels for the freer cir-

Valley, as in other places, is the fact that it is allowed to stand too long before the first cutting is taken. It seems to be the common practice to let meadows stand until the blooming period of timothy is well over, with the result that the clover is too far advanced for the best hay even, and the chances for a good second growth for seed crop are reduced almost to the vanishing point. Even for hay, much better results would be secured if the meadows were cut when the clover is in full bloom, and for seed it should be cut even sooner. If you have sufficient clover meadow, it is a good plan to pasture part of it, up to about the middle of June, and then run the mower over it with the cutter bar set high to remove the roughage. This allows the second growth to get a good early start, and usually gives a better yield of seed. It has the further advantage of making the seed crop less liable to attack from the clover midge, which sometimes does great damage to the later crops.

When growing clover seed for market or for home use, it is of the utmost importance to see that it is as free as possible from weed seeds, or its market value will be greatly lowered or entirely destroyed. In order to produce pure seed, it is necessary, first, to select a well-prepared, clean piece of land, preferably following a well-cared-for hoed crop. Then sow the cleanest available seed and follow this up by carefully hand-pulling or spudding any weeds that may appear in the seed crop.

THE SEED CONTROL ACT A BENEFIT.

The Seed Control Act now requires all timothy, alsike, red clover and alfalfa seed sold by seed merchants to be plainly marked with one of the four grades fixed by the Act, namely, Extra No. 1, No. 1, No. 2, and No. 3. Extra No. 1 is hardly a commercial grade, as the standard is so high that only an occasional lot of seed reaches it. To grade Extra No. 1, seed must be pure as to kind, clean, sound, of good color, and be absolutely free from the seeds of the weeds classed noxious under the Seed Control Act. It may contain a trace of weed seeds of secondary importance, such as Foxtail. No. 1 seed must contain not more than five noxious weed seeds per ounce, and a total of not more than 100 weed seeds of all kinds per ounce. No. 2 seed may contain 20 noxious weed seeds, and a total of 200 weed seeds of all kinds per ounce. No. 3 seed may contain 80 noxious weed seeds, and 400 weed seeds of all kinds per ounce. These standards apply to timothy, red clover and alfalfa seed. With alsike they are the same, only that twice as many noxious weed seeds are allowed in each grade, while the total of all kinds is the same. Any seed coming below the No. 3 standard is prohibited from sale.

These grades make it possible for farmers and retail merchants to buy their seeds more intelligently. Farmers intending to grow clover for seed should buy nothing lower than No. 1, for the difference in price will be repaid many times in the higher value of the resulting crop. On some markets there is a spread of \$3 between No. 1 and No. 2 seed at present, and it should be the aim of every grower to select his seed and weed his crop, so that his seed can be made to grade No. 1, if possible, or at least No. 2. The longer the Act is in force, the less demand there will be for No. 3 seed and the greater spread in price between the higher grades. The farmer who sows dirty seed or tries to grow clover seed on dirty land will soon be without a market, as seed below No. 3 standard cannot be sold in Canada, and our export market for it is fast being cut off.

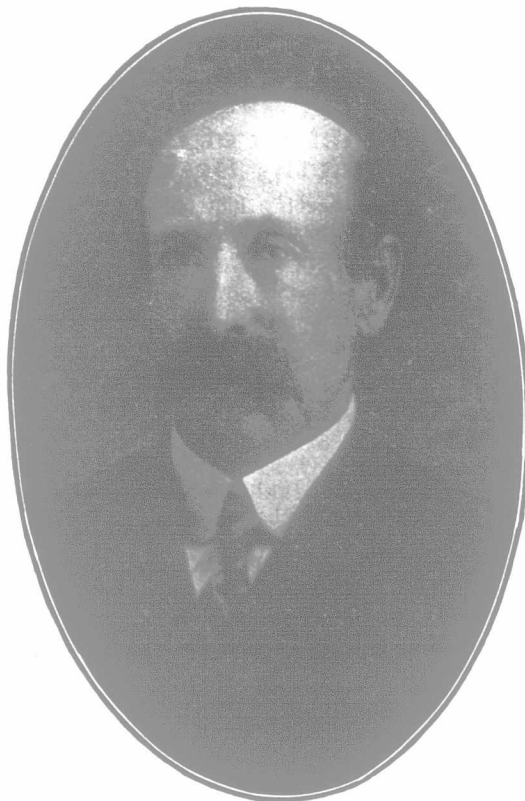
THRESHING DIFFICULTY.

One of the difficulties which the farmers of this district have to contend with in growing clover seed at present, but one which should soon be remedied, is the scarcity of clover-hullers. In the Province of Quebec, the Provincial Department of Agriculture has encouraged the production of clover seed by purchasing a huller, which is rented to the farmers in districts where a sufficient number have saved seed to make it worth while sending the machinery. In Eastern Ontario there are no clover-hullers as yet, and it would be difficult for an individual farmer to secure one, but there should be no trouble if a number of farmers in a district would agree to grow seed. At any rate, the Seed Branch will promise you this: If the farmers in any district will club together and save a total of 150 or 200 acres of clover for seed, we will do our best to assist in having a huller brought from Western Ontario to thresh it.

But the lack of a huller need not prevent any one from growing seed, for the threshing can be done quite satisfactorily by an ordinary grain thresher, specially fitted up. The work is slower, and the seed cannot be so well hulled and cleaned for market, but the quantity of seed is of such small importance if the seed is for home use, that it is necessary to thresh with an ordinary thresher. The work can be done more thoroughly, and in cold, frosty weather.

During the past few years, the seed crop has been

seed has been so high that there has been a strong temptation to save timothy for seed, and many crops that were originally cut for hay have afterwards been threshed. It should be remembered, however, that the last two years have been very abnormal in the great timothy-seed-producing area of the United States, resulting in a small crop of lower quality than usual. When normal conditions return, the price will be so much lower that it will not pay to grow timothy seed in this district, except on land that is too low or is otherwise unsuitable to be brought under the regular crop rotation. It is useless to try to grow timothy seed for the Canadian market on land that is not practically free from weeds. A con-



Seager Wheeler.

siderable portion of the timothy seed saved in this district during the last two years has been badly contaminated with ox-eye daisy seed, which disqualifies it for the trade. Ordinarily, timothy seed of good quality, and almost absolutely free from weed seeds of any kind can be purchased through the trade at a reasonable price, so that there is not the same necessity for farmers to grow their own timothy seed that there is for them to grow clover seed.

The Damage Done by Weeds:

"Weeds are serious pests in a variety of ways, according to their kind," says H. C. Lang, B.Sc., in the Transactions of the Highland and Agricultural Society: "(1) by crowding cultivated crops and robbing them of food, moisture, light, air and heat; (2) by acting as parasites, or by climbing among and dragging down the crop; (3) by stopping up drains, hindering proper cultivation, and rendering harvesting operations difficult; (4) by giving rise to tainted milk and meat, or acting as direct poisons to stock; (5) by reducing the value of commercial seeds, flour, etc.; (6) by harboring injurious insects and fungi; and hence (7) causing considerable cash losses to the farmer or gardener."



Part of the Marquis Wheat Crop

which yielded the hundred pounds that carried off highest honors at New York last fall.

Growing the \$1000 Prize Wheat.

Seager Wheeler, of Rosthern, Saskatchewan, furnishes "The Farmer's Advocate" of Winnipeg, Man., an interesting account of how he grew the Marquis wheat that won the highest honors and \$1,000 in gold at the New York Land Show, last autumn. He prefaces the story with a useful account of pioneering experience, his plan of farming and method of seed-grain improvement. He is not one of the get-rich-quick-and-easy style of Western farmers, but an old-timer, who came from Ventnor, Isle of Wight, England, early in 1885, trailing it from Moosejaw to Saskatoon, and working out with a farmer for a couple of years. He cut wheat with cradles and hay with the scythe, binding by hand and using hand rakes. After working for the C. P. R. a couple of years, he homesteaded near Clark's Crossing, and did his breaking with oxen, and started out by getting good grain, grass and potato seed from the Indian Head Experimental Farm. He disputes the notion that it is necessary to change seed every few years, having better barley, potatoes and brome grass now than he had twenty years ago, without a change. After some years, he settled in what he considered a better location, at Rosthern, and began planting trees, with a view to permanent farming and home-making. He says: "I always aim to do things thoroughly. I am a book farmer and an indoor farmer, as well. We often hear uncomplimentary remarks passed about such men, but show me the farmer who does not read, and I will show you a poor farmer. Problems are worked out in the arm-chair beside the fire as well as by observing during the day outside. I take one daily, three weekly, and five farm papers, besides other good reading material."

"A few years ago I became a member of the Canadian Seed-growers' Association, and would say that the West would be more prosperous if hundreds more would join and engage in the work. There is room for thousands. The object of the association is to help farmers to grow pure seed, and encourage them in every way, keeping records and in due time issuing certificates of registration for seed grown according to their rules and regulations. At the time I became a member, I was working along lines of my own, but as soon as I became acquainted with the association I noted that it was systematic, something that I was looking for. From that time to the present I have noted a great improvement. It is wonderful how grain will respond to careful treatment."

He has practiced hand selection, and makes use of seed plots, growing roots and summer-fallowing regularly. He uses a homemade roller behind his gang plow, which packs the furrows and holds moisture. Then follows a surface-packer and a plank drag like the King road drag, to level the field and put the soil in perfect condition for the germination of weed seeds. He uses the drag on breaking, as well as spring and fall plowing, and, in fact, would not undertake to farm without it. The wheat winning this prize was grown on land broken four or five years ago, and sown with Marquis wheat. He says: "Good seed was obtained from the Rosthern Experimental Farm, some from Steele-Briggs Co., and a small five-pound sample from Dr. Chas. E. Saunders, at the Experimental Farm, Ottawa. This latter being pedigreed seed, I sowed it on my seed plot. The yields were as follows: Dr. Saunders' small sample, on an area of about one-twentieth of an acre, yielded at the rate of 80 bushels per acre. I cannot expect to duplicate this on a large acreage. The other two lots, on larger areas, did not go so high, but stood 45 bushels or better. These

high yields I could not have obtained with inferior seed. The prize wheat was sown on April 21st, and cut on August 28th. After sowing, it was packed. When the grain was up four to six inches high, it was harrowed by the light harrows for the purpose of cultivation. The growth was vigorous and strong. I may say that I always harrow growing grain wherever possible. The main thing is to have a solid seed-bed and uniform surface. I run the harrows with the drill rows on a hot, dry day to kill weeds. Such harrowing does not injure the grain. On a loose seed-bed, however, harrows might smother some grain, and also pull some out."

The grain was stooked in the usual way, eight or nine sheaves to the stook, and, owing to wet weather, threshing was delayed, and was finally done with a homemade thresher used for threshing out small plots. "This consists of a homemade cylinder and concave, set in a box about one foot wide. The grain was fed in handfuls, and when threshed was sifted from the chaff and cleaned by a fanning mill, and prepared for entry at the New York show. If I had not cleaned it thoroughly, it would not have stood any chance in such keen competition as developed at the all-American contest. It was cleaned in the same manner as for seed purposes. There was no broken grains in it, no immature grains, no useless impurities, and no smut. Some grains were slightly weathered, but this was a circumstance over which I had no control. It is giving attention to small details that counts whether we are growing grain for market, for seed or for exhibition purposes, attention to every detail in preparing the seed and the seed-bed, treatment for smut, and in the cleaning process. My seed grain is prepared in a similar manner to that entered in the competition. Every farmer should be particular to sow only the best seed; he should take care that the seeder is cleaned before putting in another variety or another kind of grain. Clean off the binder to every straw when entering on a field of grain of another variety. Such time cannot be counted as lost, but rather as gained.

I have used formaldehyde for treating for smut for some years, and find it better than bluestone. While I have no smut in my wheat, I use it for prevention, as prevention is better than cure.

"I use formaldehyde, strength 1 part of the liquid solution to 40 of water, but should say, where grain is very smutty, a stronger mixture should be used accordingly. I dip my grain in sacks, allowing the grain to be thoroughly moistened, and then drained in the sack. Then I spread it out and cover over for two hours. Treating it is done shortly before using. My prize wheat had no advantage over the rest grown on the farm, but I personally believe that Marquis wheat is the coming wheat for the West. As I have had occasion to study it throughout the growing season, I can say that it has more good qualities than any other variety that has come under my notice. In the work of hand selection and of growing it on a special plot, I have watched it from the time it came out of the ground until it was harvested. It is a vigorous grower, has good stiff straw, although finer than Red Fife, does not lodge easily, carries a good stiff head, has a hard, horny chaff that closes tightly over the grain, preventing waste in handling."

Eight Months' Credit Offer.

Thousands of our subscribers took advantage of our Special Renewal Offer, the date of which expired January 31st.

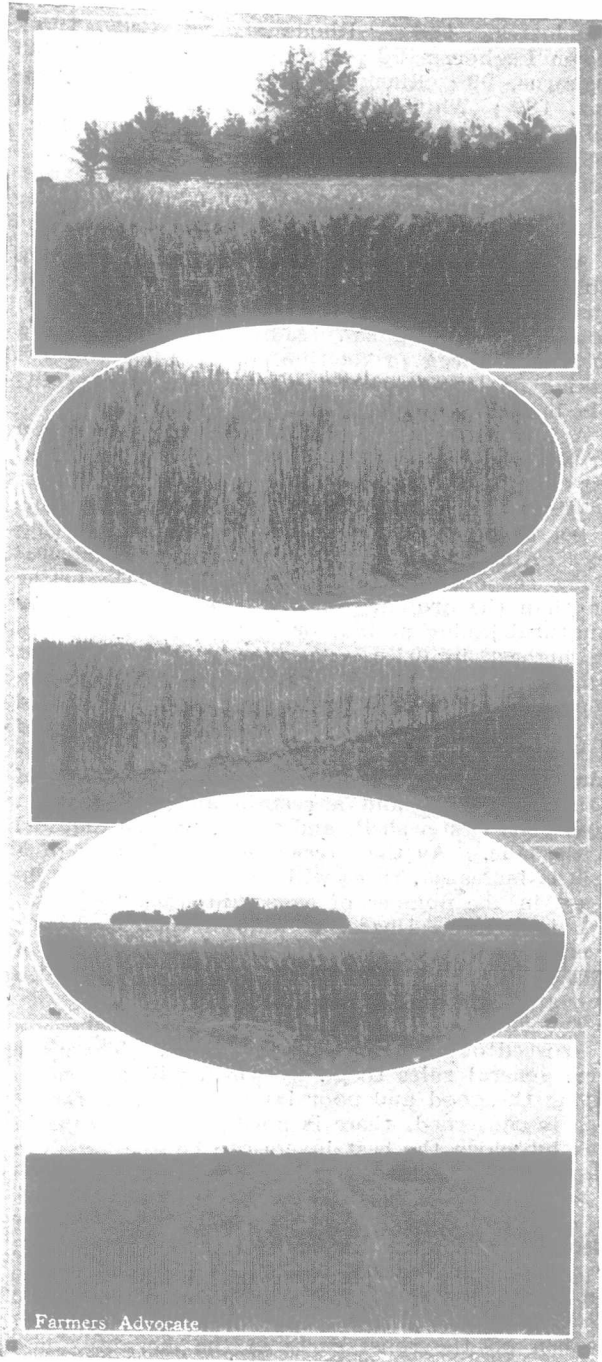
We are now making an 8-MONTHS' CREDIT OFFER, as follows:—For each new yearly subscription you send us, accompanied by \$1.50, we will credit you with 8 months' renewal of your own subscription free. Or, if preferred, you may send in the new names, accompanied by the full subscription price, and have your choice of some of our premiums.

Elevating in Character.

Please find enclosed \$1.50 as renewal of my subscription for 1912. I enjoy "The Farmer's Advocate" immensely, and find it very instructive. Besides giving the best information to the farmer, it is very elevating in character.

Wentworth Co., Ont. ALEX. CHRISTIE.

A Hamilton County farm-boy, discussing the vexed labor problem, complains that, although between years of age, he has worked ever since he was eight years old, has never had a car ride, and been away from home two weeks. This hardly seems like giving the boy a chance.



Some Views Among Mr. Wheeler's Grain Crop.

No. 1.—Hand-selected seed plot of Preston wheat in 1910, with no rain until July 3. No. 2.—Selected Preston wheat, 1911, average height 5 feet. No. 3.—Improved seed plot of Preston wheat in 1911. No. 4.—Multiply plot of Preston wheat in 1911. No. 5.—Harvest scene in Multiply plot of Preston wheat, with heavy growth of stubble.



Homemade Roller Attached to Plow.

The Farm Boy and the Country School.

One of the ill results of the difficulty of securing farm labor is the tendency to take the farmer's son from school at altogether too young an age. For a while the boy is unaware of what he is missing by being out of school, but when he comes into competition with, or when he begins to contrast himself with boys and young men who have enjoyed the advantages of a good schooling, he begins to realize the greatness of his loss. Happy is the youth who makes this discovery early enough, and who makes up his mind to remedy the defects of his earlier years. Happier still is he if he discovers in the rural-school teacher or a friend who is willing to help him reclaim his neglected past. There are scores of men promi-

nent in municipal business, professional, political and agricultural activity, who look upon the day they resolved to have a good education as the golden era of their existence. With their resolve to study there came a new view of life, and, as the fruit of their study, they reaped a new power to grapple with men and affairs. Had they not studied, they realize that they never could have attained anything beyond a very low level of mediocrity.

During the winter months, there is no reason why the average country youth should not lay the foundation of a liberal education. The school programme should be so arranged that he may devote himself to acquiring proficiency in such subjects as farm arithmetic and bookkeeping, useful reading, and such elementary composition as will enable him to commit his thoughts upon every-day subjects to writing. There is no good reason why any country youth who is possessed of an ordinary amount of ability and ambition should not in a single winter acquire at least this amount of useful knowledge. This step taken, the young man's value to society is increased many times over. This step may well be followed by one of the short courses at the O.A.C., or by a term at a good business college. Every advance made in useful knowledge means growth in power and increased ability to serve the state, and a developed capacity to enjoy life. About the worst thing a farmer's son or a farmer's helper can do is to loaf the winter through, or to spend its precious hours in fruitless pleasure. About the wisest thing he can do is to secure a good practical education. Every hour and dollar and effort spent in this direction will bring in all coming years a return so great that it cannot be estimated.

York Co., Ont. J. K.

THE DAIRY.

Guelph Creamery Report.

The report of the 1911 business of the Guelph, Ont., Creamery Company is illustrative of this branch of the dairy industry in Canada. The amount of butter manufactured was 354,979 lbs., an increase of 166,968 lbs. over 1910. The total receipts were \$96,824.70, an increase of \$47,016.30 over 1910. The average selling price for the year was 25.66 cents per pound, and the net price per pound of fat paid the patrons was 26.71 cents. Prof. H. H. Dean, who was present at the meeting, stated that prospects were exceptionally bright for good prices for dairy products. He strongly emphasized the great advantage of having silos, and growing of more corn and alfalfa, and next to grow first-class dairy cows. J. Burgess, of the staff of the Ottawa Dairy Division, pointed out the benefit derived from a systematic method of weighing and testing each individual cow's milk. From charts, he showed that where this had been followed for a few years, the increased production of herds had been 25 per cent. and upwards, some herds having increased over 100 per cent. At the close of his address, an association among the patrons was organized, with seventeen members, representing 177 cows. John Hohenadel was elected president; W. M. Croft, vice-president, with Neil McLean, J. Stovel and C. H. Harris to act as committee.

Saving Butter and Mangers.

Editor "The Farmer's Advocate":

I frequently see an article in our local papers in which the question is asked, "How may I treat my cream in order to get butter in winter?" And again, "Why do my cattle eat boards, shingles, leather, and the barn?" I have experienced all this, and have had to frequently renew their mangers where they had gnawed them away. I pasteurized the cream, put salt in it, and tried various means to get butter, and sometimes had to give up in despair. But now I have no trouble in either case. I treat the cows, instead of the milk. I give a warm slop of bran or mash night and morning; at noon, a liberal feed of roots, generally turnips. I put a forkful of straw or rough feed in the manger under their feed of hay. When they finish eating the hay, if they want it, they can eat the straw. I feed in individual mangers, and clean out mangers once a day. The succulent feed acts as a laxative, counterbalancing the effect of the dry straw and hay, and keeps the bowels loose.

Since adopting this method, I have had no trouble with either my cream or crib, and do not have to hustle the cattle away from bearing clapboards off the barn or pickets off the fence. I keep my turnips in a bin in the stable, so you may know stable is comfortable. I think severe cold is incompatible with health where there is no exercise. Now, does it not appear that the above treatment accounts for the change. The cows look better, milk better, and feel better.

Cumberland Co., N. S. D. W. DIMOCK.

[Note.—You probably have to thank the wheat

bran for much of your success. Bran is a food carrying a large percentage of phosphate, which is an element often deficient in farm rations, and a lack of it is believed to induce the habit of chewing bones, wood, and the like. In some other respects your practice is also commendable, though it is not necessary to have a high temperature in the stable in order to obtain good results from cattle. Look first to the ventilation—and try to grow mangels, instead of turnips, for dairy cows. Your accustomed palate may detect no turnip flavor in the butter, but others may, even though you are careful to feed the roots some hours before milking.—Editor.]

Some Creamery Questions.

Editor "The Farmer's Advocate":

There are some subjects that I would like to see discussed in "The Farmer's Advocate," and one is why creameries can't give us credit for as much butter as we can make at home with the same amount of cream. Also, when butter is worth 24 cents, wholesale, they pay us off with 21 or 22 cents per pound for butter-fat, after taking 3½ cents for making and selling. I don't understand where the rest of the money goes to. I know cases where two pounds of cream made one pound of butter, and when it went to the creamery it only tested 25 per cent. butter-fat. Also, what are the duties of the inspector? Should he see that buttermakers are capable of managing the business part, as well as being able to keep up quality? Would like to know what was the average price paid for butter-fat in Ontario this last season (from May to December). There has been a lot of dissatisfaction among creamery patrons, and perhaps not without reason. Please touch this subject up in your own clear way, for the above are facts, not guesswork.

JOS. SEENS.

Ans.—We do not see how more butter could be made at home from a given number of pounds of cream than could be made from the same cream at the creamery, provided the homemade butter did not contain an excessive amount of salt, curd and water for finest quality. It is unlawful to incorporate more than 16 per cent. of water in butter. Creamery butter averages about 14 per cent. of water.

The net price per pound of fat which can be paid the cream producer by the creamery will depend on (1) the charge for manufacturing, (2) the price at which the butter is sold, (3) the per cent. of overrun. (By overrun is meant the pounds of butter made over and above the pounds of butter-fat. This excess weight consists of water, salt and curd, and is influenced by (1) efficiency of churning, (2) composition of the butter, (3) richness of cream, (4) mechanical losses, (5) correct reading of the cream tests.)

When butter sells for 24 cents per pound—3½ cents per pound of butter charged for manufacturing, and the producer is paid 22 cents per pound of butter-fat—if we take 100 pounds of cream testing 30 per cent., this would yield 30 pounds of fat (loss in churning not taken into consideration), at 22 cents per pound (cost of making deducted), would equal \$6.60. The net price per pound of butter would be 24 cents, less 3½ cents for making, or \$0.205 cents. The total butter made from this cream would be shown by dividing \$6.60 by \$0.205, which gives 32.19 pounds. This shows an overrun of about 7 per cent., which is far too low, and probably accounts for the low price of fat.

In order that two pounds of cream should make one pound of butter, if the overrun is 16 per cent., the cream would have to test about 43 per cent.

The creamery instructors are expected to assist the buttermaker in every way possible to make a first-class quality of butter, and, when possible, to give such information to the patrons as will enable them to produce only a first-grade cream, in order that the finest quality of creamery butter may be manufactured.

We do not know the average price paid in Ontario the past season for milk fat. F. H.

POULTRY.

The Battle of the Breeds.

The Philadelphia North American International Egg-laying Contest for one year, at the Storrs Experiment Station, goes on apace, despite changeable and unfavorable weather. At the end of the twelfth week, the English pen of five White Leghorns was still leading, with a comfortable margin—a total of 225 eggs, as against 170 by a New Jersey pen of the same breed. The highest score for the twelfth week, 23 eggs, was made by a pen of Rhode Island Reds from Philadelphia. In a couple of days of Barred and White Rocks, an egg per day every day of the seven was laid by some birds in each variety, the leaders were as follows for the twelve weeks: Barred Rocks, 133; White Rocks, 124; Partridge Rocks, 75; White

Wyandottes, 148; Rhode Island Reds, 166; Brown Leghorns, 92; White Leghorns, 225; Buff Leghorns, 92; Black Minorcas, 47; Buff Orpingtons, 139; White Orpingtons, 124. Eight pens had not yet started to lay, but their owners expect them to pull up on the home stretch.

Winter Egg Production.

At this time of year, the all-important question about the poultry on your farm is, "Are your hens laying?" With eggs selling at 40 and 50 cents a dozen, we can readily see what even a small winter-egg production would mean towards making poultry-keeping on the farm a more profitable branch of farming.

A fair estimate of the average egg production per hen per year would be about five dozen eggs, and the greater number of these eggs are laid at the time of year when eggs are cheap. The time to get eggs is when your neighbor is not getting any. Almost any hen will lay during the natural laying season, but it takes just a little better hen than the ordinary one to lay eggs during the unnatural laying period, or at the time when eggs are highest in price. A hen should lay eight dozen eggs per year in order to pay for her own keep, and, to be a paying investment, she should lay the greater number of these at the time of year when they are the highest price. Under ordinary conditions she will eat about 70 pounds of grain in a year, and a certain amount of green food, grit, oyster-shell, and so on, will be required on the side. As the average egg production of a flock is increased, there will be a proportionate increase in the number of eggs laid when they are high in price. Hence, it follows that a heavy layer is not merely more profitable on account of laying more eggs, but also for laying them when they are higher in price.

The first step towards a higher egg production is to weed out the drones in the flock. There are some general rules to go by which will aid in selecting the good and poor layers. But, as far as type is concerned, there is no distinct egg type in hens by which the best layers can be selected. The trap-nest is the only way to select the layers, and it requires much more labor to operate these on an ordinary farm. Apart from this method of selecting, we have no entirely satisfactory method or system of selecting the layers. Usually, the hen laying in the winter time is the best layer and the right bird to breed from. Generally speaking, the hen off the roost early in the morning, and working all day, and back to the roost again late at night, is the best layer. As a rule, the heavy layer will loose or moult out practically all her feathers in a few days' time, leaving her body almost bare. Hens heavy behind, or having a large amount of internal fat, are usually poor layers.

In almost every case hens will lay more eggs during their pullet year than later in life. Each succeeding year shows a proportionate decrease in the egg yield. Hence, we see why pullets and yearling hens are the most profitable. Weed out and kill off all hens that are over two years old. It seldom pays to keep them over two years, unless they are exceptionally good breeders.

As far as heavy egg production is concerned, it is more a question of strain than of breed, but, as a rule, the heavier or utility breeds, like the Rocks, Wyandottes, Orpingtons, or Reds, give a heavier winter production than any of the lighter breeds. They are less affected by the rise and fall in temperature than the lighter breeds. In all the utility breeds there are both good and poor layers, and heavy egg production is simply a question of selecting and breeding from the best layers, and building up a strain in this way.

The second step towards developing a laying strain of hens is to introduce pure-bred blood of an egg-producing strain on the male side. This method of increasing the egg yield is probably the one most commonly followed. The majority of farmers bring in new blood almost every year, and by paying a little attention to the egg-producing qualities of the male line, the increased returns in the way of eggs will pay a good many times over for the first cost of the pure-bred blood. By carefully selecting the best layers year after year, and breeding only from them, and by using only high-producing males, a great laying strain can be built up in a few years' time. If this plan of building up laying strains were followed by the farmers, we can readily see what effect it would have on the poultry industry.

The third step, and the last we will mention at this time, is the value of good food and proper feeding. When it comes to the influence of food on winter egg production, we are somewhat at a loss what to say, as it is impossible to lay down any hard and fast rules for feeding which will give equally good results in all cases. One thing, however, is certain, no system of feeding can force egg production if the hens are not of a laying strain. There are so many different kinds of strain on the farm that can be fed singly or in combination, and good results can be obtained, that it is difficult to say what to feed, and what to

Most farmers have, however, two grains in almost unlimited quantities which can be fed and converted into winter eggs to better advantage than any other grains. We refer to the value of wheat and oats as egg-producing foods. The former should be fed as whole wheat, or screenings, scattered in the litter morning and night, and the latter as crushed oats. Instead of feeding the oats whole, they should be crushed by running them through a roller-chopper. Just crush them enough to break the kernel and expose the white of it, but with the hull still adhering to the kernel. Do not crush them too much or grind too fine, as the hens will not eat them so readily, and all the hull will be wasted. If they are just crushed so that the hull still adheres to the kernel, the hens will eat the hulls and all. Feed these oats as a dry mash in a hopper so arranged that the hens can get at them at any time. In no case throw them into the litter.

If buttermilk or sour milk is available, by all means give some to the hens, instead of water, to drink. Supply green food in the form of cabbage, mangels, turnips or carrots. Give them plenty of grit or coarse sand and oyster shell. Clover hay or alfalfa is an excellent food to feed along with this ration. This can be fed the same as to horses or cattle, or the leaves can be scalded and mixed with bran and table scraps, and fed as a warm, wet mash once a day. Where the hens have no milk to drink, some meat, cut green bone or beef scrap should be fed. Some barley or corn can be fed with the wheat by way of variety. This ration, simple as it is, is one of the best and cheapest for winter egg production that can be used on the farm. The quantities to feed must be left with the person who is taking care of the flock. Conditions vary so much that we cannot give exact quantities; the general vigor and health of the flock has to be taken into consideration, and different breeds will require different amounts. One thing, however, bear in mind, exercise is essential under all conditions.

If only every farmer in the country would aim to increase his egg production 10 or 20 eggs per hen, it would be time and money well spent. There is no danger of overdoing it. The market for winter eggs can never be overstocked. Winter eggs always have been and always will be in strong demand, and, as long as our country is in such a healthy state of prosperity, our market demands will continue to increase and expand.—[M. C. Herner, B.S.A., in Farmer's Advocate & Home Journal, Winnipeg.]

Heterodox Views on Winter Egg Production.

Editor "The Farmer's Advocate":

Last week I was listening to a farmer's wife discussing the "hen" question. "Well," said she, "I'm not going to make the effort this winter to get the hens to lay that I have done in the past. I used to muss away and boil grain, turnips and odd scraps of meat, and feed it to them hot, first mixing it up with bran; throw them some cabbage I had saved up, and occasionally some mangels; carry them a basket of hay seeds every now and then; give them grits and oyster-shells, and many a half hour I've spent smashing up bones for them with John's big hammer, so that they wouldn't lay soft-shelled eggs. Then, if the weather was very cold, I'd take them hot drinks twice a day. Of course, I coaxed them to lay a few eggs in December, and a few dozens in January, and got the high price for them. But think of the time I spent going down to that poultry house, often through drifts of snow, to feed those hens and to look for eggs, in case they might get frozen in the cold weather."

"Then, after all my trouble, a sudden lowering of the temperature or something else would happen, and the hens go on strike. Don't you think that a great deal of this fuss and effort on the part of the farmer's wives is to be able to say to their neighbors, 'Our hens are laying. How many eggs are you getting'?"

"Now, if I occupied all the time I spent on the hens keeping up my mending, darning and knitting, instead of buying socks for John and the boys; that only last them a couple of weeks; then, again, there's that old sealskin cape that I wanted to make over into a muff last year, still untouched, and a hundred other things that have been left lying undone, and I think I could overtake some of them if I hadn't to potter after the hens."

"Besides, I've noticed that it wasn't the few eggs that the hens laid in the cold weather and brought the big price, but it was when the nice warm weather came, and they made a business of laying, that my pocketbook filled up, even if the price was much lower. And I somehow think that, after the hens have had a rest in winter, when they do start they will do better and have no setback."

"I've been following the poultry experts' advice through their varying moods, from warm

henery to fresh-air henery, from hot mash to dry hopper feeding, and from hot drinks to cold water and even snow-eating, and I've often wondered if it isn't a case of 'the blind leading the blind.' Anyhow, I'm letting the men feed the hens this winter, and so far we've got only one egg.

Now, being a beginner in the poultry business, this view of things rather staggered me, as I had been trying to follow up all the devices recommended in "The Farmer's Advocate" to get the hens to lay in winter, as that seemed the only profitable solution of keeping hens—from the poultry expert's standpoint.

Now, if any of your readers have tried resting the hen in winter, and compared the results with the time, labor and extra expense of winter-laying hens, I would be able to reach a solution as to whether winter-laying hens are really as profitable as at first sight they appear to be.

BEGINNER.

[Note.—Here's a chance for discussion. Is there not a moderate course by which a satisfactory supply of eggs may be obtained, without excessive trouble? We may have more to say later. Meanwhile, ladies first.—Editor.]

GARDEN ORCHARD.

Crop Rotation in the Garden.

Rotation, as applied to field crops, is more frequently written about than as applied to the garden, but it is not more important. While numerous instances can be cited where a crop has done well for years on the same ground, and the last crop has been much better than the first, still, taken on the whole, to obtain maximum results, rotation of crops must be followed in the garden.

The object of rotation is to so plan your garden that each crop will be benefited by the crop which preceded it. Here are some reasons why we should use rotation:

1. Crops differ as to the quality and quantity of their food requirements. Plants, such as beets, carrots, parsnips, and other root crops, require large quantities of potash for their growth. Others grown for their leaves, as cabbage, spinach, lettuce, asparagus, etc., require much nitrogen. Others, which produce seed, require phosphoric acid.

2. Plants differ as to their ability to use the plant food in the soil.

Gross feeders, such as cabbage, celery, corn and potatoes, can use manure in large quantities. Onions, radish, etc., require food in a much more available form.

3. Plants differ as to sources of food. Many are deep-rooted, and bring up food from below, as parsnips, carrots, salsify, etc. Others are shallow-rooted, as onions, radish, melons, lettuce, etc., and require the food at the surface. The legumes gather nitrogen from the air.

4. Plant food is conserved and added to by the agency of leguminous and other crops.

5. Many plants add humus to the soil, and thus improve its physical and biological condition. Beans, peas, beets, turnips, etc., add to it through the refuse left on the ground; while spinach, lettuce and onions leave practically nothing.

6. Plants differ as to an opportunity to fight weeds. Strawberries, onions, carrots, etc., are of such a nature as to make it almost impossible to fight weeds, while potatoes, cabbage, celery, etc., are excellent to clean land.

7. It gives a little better chance to fight insects. Many of these remain in the ground over winter, and if the crops were grown on the same plot each year, they would soon become too numerous for us.

8. Rotation helps control fungous diseases, and this, perhaps, is our strongest reason for advocating it. The spores of many diseases remain in the ground for a number of years. Take Potato Scab (*Oospora scabies*), experiment shows that, even although the seed is treated with commercial formalin, where the disease has been in the soil, the crop will be affected. Similarly with Black Rot and Club Root of cabbage; in many parts of the Eastern States this crop has had to be abandoned. With these diseases, rotation of crops is the only cure.

Late blight of celery (*Septoria Petroselin*) was very prevalent last summer. It is only recently that it has appeared on this continent, and is rapidly spreading. While this disease spreads mostly in warm, moist weather, and more especially where the soil is poorly drained, there is no doubt that the spores remain in the ground, especially where diseased tops have been plowed down.

9. It helps make farm operations more economical, (a) by having the income derived from several crops, rather than one; (b) by security, continuity and regularity in the employment of labor.

Below I give a rotation which has been used for many years in the College garden:

Plot 1.—Early potatoes and sweet corn. Both gross feeders, and follow after the old strawberry bed.

Plot 2.—Strawberries kept for second crop. Plowed under by July 10th, then a cover crop was sown, and plowed under either in fall or next spring.

Plot 3.—Strawberries bearing their first crop.

Plot 4.—New strawberry plantation. This is put out as early as possible in the spring.

Plot 5.—Vegetables grown for their bulbs or roots. Onions, beets, carrots, parsnips, salsify; no raw manure used on this plot.

Plot 6.—Cabbage, cauliflower, and celery. These are gross feeders, and will stand heavy dressings of manure.

Plot 7.—Vine crops. Peas, beans, cucumbers, citrons, pumpkins, squash, and tomatoes.

fruit, and started the price of land rolling up to \$1,200 and even \$1,500 per acre. Whilst many orchards are being cut out, it is encouraging to note that the planting of peaches is being accelerated, rather than deterred. Most growers believe that he who plants now and can steer clear of the above diseases, will reap his reward in the enhanced price of peaches which is expected to rule for a number of years to come. The consequence is that the nurserymen are unable to supply the demand for young peach trees, and in many instances growers will have to delay planting until next season.

The two principal varieties being planted are the Yellow St. John and Elberta, and in a commercial peach orchard one would not make a mistake if he made from 50 to 75 per cent. of his plantings of these two varieties.

The Yellow St. John is the first good peach for eating or shipping to local markets. The tree is

	1st Year.	2nd Year.	3rd Year.	4th Year.	5th Year.	6th Year.	7th Year.
Plot 1.	Early Potatoes Sweet Corn	Peas, Beans Cucumbers Citrons Pumpkins Squash Tomatoes	Cabbage Cauliflower Brussels Sprouts Celery	Onions Beets Carrots Parsnips Salsify	Strawberries new plantation	Strawberries 1 year old	Strawberries 2 years old
Plot 2.	Strawberries 2 years old	Early Potatoes Sweet Corn	Peas, Beans Cucumbers Citrons Pumpkins Squash Tomatoes	Cabbage Cauliflower Brussels Sprouts Celery	Onions Beets Carrots Parsnips Salsify	Strawberries new plantation	Strawberries 1 year old
Plot 3.	Strawberries first crop	Strawberries 2 years old	Early Potatoes Sweet Corn	Peas, Beans Cucumbers Citrons Pumpkins Squash Tomatoes	Cabbage Cauliflower Brussels Sprouts Celery	Onions Beets Carrots Parsnips Salsify	Strawberries new plantation
Plot 4.	Strawberries new plantation	Strawberries 1 year old	Strawberries 2 years old	Early Potatoes Sweet Corn	Peas, Beans Cucumbers Citrons Pumpkins Squash Tomatoes	Cabbage Cauliflower Brussels Sprouts Celery	Onions Beets Carrots Parsnips Salsify
Plot 5.	Onions Beets Carrots Parsnips Salsify	Strawberries new plantation	Strawberries 1 year old	Strawberries 2 years old	Early Potatoes Sweet Corn	Peas, Beans Cucumbers Citrons Pumpkins Squash Tomatoes	Cabbage Cauliflower Brussels Sprouts Celery
Plot 6.	Cabbage Cauliflower Brussels Sprouts Celery	Onions Beets Carrots Parsnips Salsify	Strawberries new plantation	Strawberries 1 year old	Strawberries 2 years old	Early Potatoes Sweet Corn	Peas, Beans Cucumbers Citrons Pumpkins Squash Tomatoes
Plot 7.	Peas, Beans Cucumbers Citrons Pumpkins Squash Tomatoes	Cabbage Cauliflower Brussels Sprouts Celery	Onions Beets Carrots Parsnips Salsify	Strawberries new plantation	Strawberries 1 year old	Strawberries 2 years old	Early Potatoes Sweet Corn

This forms a seven-year rotation, but, with strawberries, it will be two years before the plan will be complete, as one can easily see.

A. H. McLENNAN.

Ontario Agricultural College.

Topical Fruit Notes.

ABOUT PEACHES.

The protracted period of very cold weather which the whole country experienced in the early part of January, when even in some of the most protected spots of the Niagara fruit belt the temperature dropped as low as ten below zero, brought forcibly to many fruit-growers' minds the very precarious nature of their calling. It was especially disquieting to the peach-growers, for when the temperature plays around below zero for any length of time, the tender peach buds are very liable to suffer. However, it is not thought that there has been any serious damage done, except to some of the more tender varieties, such as Early Crawford. Some growers who have orchards in exposed conditions claim greater damage, but the exact loss will not be known until the crop sets.

A contemporary, in advocating stronger measures for the repression of "Little Peach" and "Yellows," claims that it was the peach that made the Niagara fruit belt famous, and that it would be disastrous to allow these two diseases to gain the upper hand. There is no doubt of it. With us the peach holds premier position, and it was the deep, sandy soil, as found around Grimsby, that proved so congenial to this delicious

vigorous and productive, and the fruit large, delicious and handsome. Earlier than this are two or three varieties, such as Sneed, Alexander and Triumph, which might be planted to a very limited extent if there is any local demand to supply. Ripening about the same time as the St. John are two other varieties worthy of attention, the Early Crawford and Fitzgerald. These are both productive varieties of excellent quality, the latter being quite hardy, but the former is one of our more tender varieties. After these, and coming slightly before the Elberta, the Champion and Reeves are planted to some extent. The former is an excellent, white-fleshed peach of first quality, for which, however, there is a limited demand, because of its color. The Reeves is not considered very productive, but is said to do best on a well-drained clay soil.

Then comes the Elberta, about the middle of September—the main commercial variety, because it is productive, hardy, an excellent shipper and canner. Its dessert quality is only fair, so that, for local markets it should be supplemented by the Late Crawford, which is of better quality, but, unfortunately, it is not very productive, and on this account very little planted. Following these, a small percentage of Lemon Free and Smock will bring the season to a close.

The peach, more than any other fruit, must be well chosen for the district in which the grower intends to plant. It must be well tested, especially from the standpoint of hardiness, or the grower will find not only his crop destroyed from the freezing of the buds, but probably also the

trees killed by root-freezing. So far, I think, Niagara district can claim to be the only eminently successful peach area in Canada, but its monopoly of this industry is now being challenged by certain limited areas in Essex, Norfolk and Lambton. How successful they will be remains for a severe winter to tell.

From present indications, it is very probable that a precooling plant will be erected at some point in the Niagara District this coming season. The Ontario and Western Co-operative Association have been advocating the erection of such a plant for some years, and it seems that the Government is now ready to materially assist them in the scheme for the benefit of our fruit-growers in general. The cost will be approximately \$75,000, of which amount the growers are prepared to subscribe \$25,000, if the Provincial and Dominion Governments will between them advance \$50,000. It is believed that the latter have already signified their willingness to assist materially, but as yet the intentions of the former are not known. As considerable of the early work in pre-cooling our fruits will be experimental, it is only fair that the Government should assist generously, and not remain dependent altogether on an American supply of information.

There is not the least doubt but that the principle of co-operation for the sale of our tender fruits is gaining in strength every year. Every year, properly-organized co-operative societies unish up their shipping season stronger than ever, and every year more societies are formed. Soon these societies will see the necessity of having a general understanding, and then a closer organization, until the time comes when a central sales agency will conduct the sale of the whole output of the Niagara Fruit Belt, as is being successfully accomplished in various fruit centers of the United States. I have it from a good authority that the Niagara fruit belt has practically a monopoly over the growing of tender fruits in Canada, under which circumstance there should be no difficulty at all in more successfully organizing the distribution of fruit, so that the consumer will get all he wants at a fair price, and so that the producer will not receive a starvation price for his fruit, as he did not many years ago. The industry being already naturally centralized, one great obstacle usually in the way of such organization will not present itself.

A number of co-operative societies are holding their annual general meetings about this time of the year, and such meetings should furnish much interesting information with reference to points that have made some successful, and others probably a little less so. The main point, I believe, would rest on the importance attached to the local associations, if such are at all joined in any larger organization; and if not, then upon the business efficiency of the management. Lack of what is called the true co-operative spirit is purely a sentimental and academic objection, which is blown away when dollars and cents count in the returns.

The severe frosts which swept down over Southern California late last December caused great damage to the citrus crops, and it is reported that 50 to 60 per cent. of the orange crop is destroyed, and about 75 per cent. of the lemons, the latter being more susceptible to frost. The extent of loss will be realized when one considers that last year the output of citrus fruits was estimated at 50,000 cars, valued at least at \$25,000,000. Most packing-houses are shut down for some months, and a few are closed for a year. Thousands of laborers are wandering around searching for work where there is none to be had. This is but another evidence of the great risk taken in fruit-growing. The citrus-growers have lost. Will it affect the prices of our fruits?

Some few months ago "The Farmer's Advocate" published an article referring to experiments conducted with California grapes, with reference to their keeping qualities, and asked if any person could give any experience in keeping our native grapes. The California grapes are firm and dry, and are admirably adapted for storage. Our grapes are of the American type, which will not keep so well. However, we have had no difficulty in keeping Rogers 15 (Agawam), Rogers 11 and 43 (Black Rogers), Verdigennes and Catawbas until Christmas. They were carefully picked, all bruised berries removed, and placed in ordinary grape baskets, then stored in a cool, dry cellar. At present, early in February, we have still a few baskets of Verdigennes in good condition. This latter grape is, in the opinion of the writer, our best-keeping grape, and anyone wishing to store grapes for Christmas, or even later, cannot do better than order this variety. The great fault is that in many localities, and certain types of soil it will not ripen, and often remains partly green at picking time.

W. R. D.
Wentworth Co., Ont.

Early Potatoes.

Editor "The Farmer's Advocate":

I just think a little talk on the line of potato culture will be in order at this season of the year. It will perhaps help some of our readers to get the right sort of seed and the right kind of soil ready by the time planting comes. The potato will adapt itself to almost any kind of soil, from sand to clay, provided there is just the right amount of moisture and plant food needed for its growth. But it is worse than folly to attempt to grow potatoes on land that is waterlogged or not well drained by either natural or artificial means. The ideal soil for potatoes appears to be a rich, deep, friable, warm loam, with good natural drainage, and well supplied with decayed or decaying vegetable matter. The potato requires a large amount of moisture to develop a good crop of potatoes. For this reason, the soil should be retentive of moisture.

I will give the method we adopt for growing early potatoes. About the end of March we get our seed potatoes, northern-grown Ohio, about the size of the one I send you as a sample, of good type of Early Ohio, medium size. Then we cut them to one and never more than two eyes. Then they are placed in flat, as close as they will go, one layer thick; then a covering of the richest kind of soil—old hotbed soil is very good for the job—is sifted over them at once, one inch deep. It is very important to cover each box as they are cut, then there is no waste of moisture from the set by evaporation. Then the flats containing the potatoes are set under the greenhouse bench, then watered—not too much, but just enough to dampen the soil and wash it between the sets. They are left there until about May 1st, or till the soil and weather are warm enough for planting. By that time they have had five weeks of slow growth, with tops or foliage two inches high, with a strong stem and root growth. Now the reader will see why we use the rich soil to cover the sets with, and the water to supply moisture and food for the roots until planted in the field. Then the leaves or the lungs of the plant get to work manufacturing plant food, which is taken from the soil by the roots, and also that which is obtained from the air; and all being favorable, a good growth may be expected. Last year (1911) we cut about 15 bushels of potatoes, and treated the way directed. We had two acres of land plowed and cleared of stones and roots for the first time in July, 1910. It was heavily manured when plowed. Being very dry, it was cut fine with the disk and Acme harrow. Then we ridged shallow, as it was very dry; could not find any moisture two feet down. The soil was a rich clay loam, stony bottom, alongside Mimico Creek. We drew the engine and pump to the bank of the creek, and two hundred feet of 1½-inch pipe; and fifteen gallons of gasoline did the job, pumping those furrows full of water once. The last week of July we planted with cauliflower. Well, I tell you it did me good just to see the way those cauliflowers got a move on, and turned out a very good crop, nearly all headed in. Then last spring (1911) we worked the same piece of land for potatoes. Just plowed once, worked with spring-tooth and disk, then drill was run out, 30 inches apart, very shallow, two inches deep. Then our sprouted potatoes were planted, one foot apart in the row, and covered by the Acme harrow, with the loose soil thrown up by the plow. We had enough of those northern-grown Ohio potatoes for one acre in the middle of the field. On the south side of these we planted Cobbler, from New Brunswick. On the north, we planted Ohio, grown in York County. All were worked alike. We hoed once and cultivated three times. There were no weeds in any part. The acre of northern-grown Ohio produced 180 bushels, all sold by the first week of August, averaging two dollars per bushel. The land was then planted to cabbage, and yielded a fair crop for the dry season. The Cobbler potatoes were about half the turn-out of the Ohio, and not off in time to plant cabbage. We just had to sow white turnips, no good only for the sheep to eat where grown. The half acre on the north had, if there was any difference, the richest soil, but was scarcely worth digging; there were not 30 bushels on the half acre—no after-crop.

Now, some will say, "What about covering the leaves when you harrow after planting?" Well, two days after planting there came a nice rain, washing the soil close around the potatoes, and the fourth day after planted, when dry, was ready for the cultivator.

Some will doubt that single-eye theory. Well, reflection smoothes the rough and makes the crooked straight. Now, my experience has taught me that one eye, with care, is better than three or four with poor treatment, as, for instance, an eye after cutting for two days or sometimes two weeks. Very few growers realize that a potato cut and exposed to sun and weather for 24 hours has lost half its vitality. That often accounts for such poor potato crops.

Some will say, "What about fertilizers?" I have used some, and no doubt they are good in some places. But some say I am a back number in regard to fertilizers. We get plenty of stable manure where the horses are fed a lot of grain, and I have been taught that in barnyard manure there is food for every plant that grows.

Back to the Single Eye.—In the spring of 1869 we bought five pounds of Early Rose potatoes, at 50 cents per pound. It seemed an awful price then, when dollars were so far between. We cut them to single eyes—and some very small eyes—planted them on good soil, with good results; from 5 pounds we dug 180 pounds. Then, in the year 1876 we bought Early Ohio and Beauty of Hebron, at about the same price, and cut to single eyes, with equally as good results as with Early Rose. And I think it behooves all potato growers to try to get good seed and handle them carefully, as plant-life is very much the same as animal, and needs as careful looking after. We, as vegetable-growers around Toronto, have given up the idea of planting potatoes that are grown within 100 miles of Toronto. For seed potatoes, we find the northern seed, from a crop not planted until about June 1st, so that they do not ripen until after they are taken out of the soil, is best for us to plant. All those that are interested in growing potatoes will do well to join the Vegetable-growers' Association of Ontario. Our aims are to help each other, and if we know a good thing tell it out.

J. W. RUSSELL
York Co., Ont.

Tiling Garden Land.

I have twenty-five acres of black-ash and elm land that I wish to use for garden purposes. I would like to know how close together the tile should be, the size of tile to use, and the depth they should be in the ground, to bring most satisfactory results for gardening purposes.

J. M.
Ans.—The distance apart depends somewhat on the nature of the soil, and without an examination it would be difficult to specify in more than a general way. I would suggest that the drains be placed four rods apart, and if it is found that the crops are better right over the drain (which would be the case unless the subsoil is quite porous), then drains should be put in half way between. Distance apart is something for which no cast-iron rule can be laid down, but must be varied according to the features met with in each individual problem. Gardening will stand drains closer together than in general farming, as the returns per acre are much larger. The laterals should not be smaller than 3 inches, no matters what the grade. If the grade is distinctly less than two inches in 100 feet, it would probably be wise to use 4-inch tile. The size of main, if there is one, cannot be determined until its grade is known. In Bulletin 175, Department of Agriculture, Toronto, will be found a table indicating the size of tile to use on different grades for different areas drained. Generally speaking, drains should be about 3 feet deep, but in swamp soils they should go down to the subsoil, even if they have to be four or five feet deep.

WM. H. DAY.

A Hotbed on the Farm.

Editor "The Farmer's Advocate":

Now is the time when most seed houses are issuing their seed catalogues, and everyone interested in a garden is carefully studying their pages so that he may have his seeds and plants decided upon and purchased in ample time for spring planting. It always pays to order early, whether it be seeds or plants, so the nurseryman may have plenty of time to get all ready for an early shipment. There is usually far more blame chargeable to the delay of the planter than to the tardiness of the nurseryman in getting behind in spring planting.

Have all your plans made as to how and what is to be planted, before you order. Decide the distances apart for trees or plants, and have everything in readiness when they come. It is the early planting that starts off the best and does the best all the growing season.

The average farmer never thinks of preparing a hotbed, considering it to be too much work for all the benefit derived from it. For my part, I would not care to forego all the benefits and pleasures I get from it, although it is not an absolutely essential adjunct of a fairly successful garden; yet a small bed, once established would more than pay for all the labor expended on it.

Doubtless, there are few "Farmer's Advocate" readers who could not accomplish something in the forcing line, and even one sash, if worked to the limit, will give surprising results. Failing a regular hotbed, an honest effort made with a warm, sunny window, east or south exposure, and a box of good garden loam, will be very helpful, and save considerable time over an entire dependence upon the open ground.

In the construction of the hotbed, take fresh

stable manure, which is the best available material for it. To be at the best, it should contain a good percentage of straw bedding, although leaves or litter will answer. Pile it under shelter and fork it over often enough to prevent burning. A few days before it is required for use, thoroughly, mix, and pile it, to start the heating process. If necessary, wet it slightly, and let it remain thus until heat is generated. Then fork it over once again, so that the heat will be evenly distributed, and when it is well warmed up, it is ready for use.

For the sash, outside window sashes are as good as any. These usually have four large lights. If the frame has to be purchased, though, as the large glass is expensive, and costs considerable to replace if broken, it is better to get the common sky-light sash, holding three or four rows of 8 x 10-inch or 10 x 12-inch glass. These can be ordered from any sash and door factory, and any size desired. A good way is to order the sash first, then the size of the frame can be easily adjusted to suit any size of sash desired.

To make the frame, take one-inch lumber, or better, inch-and-a-half plank, fourteen inches high in front, and eighteen or twenty inches behind. Dress the lumber, if you want to make an extra-nice one, and put it together with bolts, add a coat of paint, and, if taken apart and stored away when not in use, you will have a frame that will last for years.

It is most important to have good soil for your bed, avoiding any that would bake or become lumpy. I take good rich garden loam, and add to it a pint of air-slaked lime to every bushel of soil. This prevents fungous diseases, and helps to keep away insects. Good thrifty plants cannot be grown on soil lacking fertility; so, if well fertilized, it will save disappointments.

Always select a well-drained spot, warm and sunny, and well sheltered from the west and north. One of the chief essentials in a hotbed is heat, and as long-continued heat can only be obtained by a heavy body of manure, this, then, is the first consideration.

Make an excavation, if possible, so as to insure an ample amount of manure being used, most of which is better put below the surface. Start the foundation at least a foot larger each way than the size of the frame. The most particular work is spreading and tramping the manure. Be sure that you have no hard lumps or loosely-packed places, else your bed will settle unevenly, and the soil will break away from and destroy the tender plant roots.

Pack the manure several inches high before the frame is placed, then fill up inside and bank the outside clear to the top. Keep the surface of the bed the same slope as the top of the frame, and have the sash fit nicely, so that warm air cannot escape.

Always put the sash on and allow the heat to get well started before putting on the soil. Then sift the soil carefully or put at least two inches of sifted soil on top to make a perfect seed-bed.

When all is carefully done, allow the bed to stand for a few days, ventilating frequently to allow the rank heat to pass off. The temperature sometimes will run to over a hundred degrees, but if you air it properly no harm will be done.

When you get it down to about ninety degrees, then it is ready for the seed.

After the severe weather is over, it is better to use cloth frames in place of the glass, to prevent any danger of sunscald. These covers may be made of cotton flour sacks, tacked tightly over frames which are better made in sections. To make them water-tight, take one egg to every pint of raw linseed oil, and, after beating them together thoroughly, coat the mixture on the cotton, repeating three or four times as each coat dries. Made this way, they will withstand any amount of rain.

As to what to plant in the hotbed, one will have to consult his own taste and needs, and much help can be obtained by consulting your catalogues so as to get the best time of planting for the different seeds. My first choice would be radish and lettuce. A good supply of these may be safely sown, and he had ready for use long before anything could be grown in the open ground. Cabbage and cauliflower should occupy a generous space, as these can be transplanted to open ground very early, and their place in the hotbed utilized for more tender plants.

Besides having enough of almost every kind of vegetable plants that require forcing, and if you are a flower-lover, flowers as well, anyone can always have enough extra cabbage, cauliflower and tomato plants to sell, to yield a handsome profit on their outlay of work and seeds, as these plants are always in demand and sell well.

Then, as the work of preparing and attending to the hotbed is nearly all done before the heavy farm work begins in the spring, I consider that the hotbed is a valuable asset on the farm.

A SUBSCRIBER'S WIFE.

Carleton Co., Ont.

A Monster Mushroom.

J. W. Rush, of York County, Ont., has drawn our attention to this item about a monstrous mushroom. It was quoted from a source unknown to us. We do not, of course, nor does Mr. Rush vouch for its accuracy:

"The largest mushroom ever picked in the State of Minnesota, and, it is believed, anywhere else, was picked about a mile from the Village of Swanville, Morrison County, Minnesota, on Sunday, August 20th, 1911.

"The mushroom in question was of the ordinary edible variety known to students of botany as agaricus campestris, and is to be found in abundance in the district, and usually averages about four pounds in weight and about ten inches in circumference. This particular mushroom, however, was 59 1/2 inches in circumference, and weighed 21 1/2 pounds. The fact of its growing by a spring, with an abundance of water, no doubt accounts for its gigantic proportions, and at the time it was picked there were growing near-by two other members of the same fungi, which would weigh over 15 pounds apiece."

THE FARM BULLETIN.

Bad Roads—Losses and Improvement—Prizes Offered.

Muddy and impassable roads constitute one of the worst handicaps of any community. A long-suffering people sometimes fail to realize or forget what their social life endures, or the losses to their business as farmers by these mud ways of traffic, and little is done to better them. In order to quicken public sentiment on the subject, "The Farmer's Advocate," therefore, offers three prizes of \$15, \$10 and \$5, for the three best contributions on "The social drawbacks to rural communities, and economic losses caused by bad roads, and how improvements are to be effected (a) by local effort, (b) by the municipalities, and (c) by governments acting conjointly with municipalities or other organizations." Illustrations might be cited, showing (with photographs) how certain highways have been permanently improved. This competition should bring out the results of valuable experience. The articles should be comprehensive, yet concise. Mere words will not count, but practical ideas, tersely stated. Fifteen hundred words is ample for a good article. The articles must be in this office by March 1st, 1912, marked "Road Competition," and, if photos are sent, the sender's name, post-office address, and the location of road, should be marked on the back.

Help Wanted.

Editor "The Farmer's Advocate":

We are reading a great deal these times of the high price of living, and a great many people seem to have the idea that the farmer is responsible. It is for that reason I would like to draw your attention to a few facts. I, as a farmer (I know there are a great many more like me), don't like to be blamed for what is not coming to us.

We are charged with the high price of living, because we are not producing nearly what we could, or what we ought to. Now, I would not say we are producing as much as we ought to, but I do say we are producing as much as we can under conditions as they are.

If the people could only see the farmer as they don't see him—they only see him when he comes to town driving in with a nice pair of horses and a stylish rig, or maybe drawing a wagonload of hogs to the market, or in the many different ways a farmer comes to town. But to see him at home on the farm, carrying swill pails to the hogs, milking cows, cleaning stables, plowing, sowing, mowing, reaping, and scores of other ways; to see him up at 4 a. m. and working till 9 p. m.; come to the house, go to bed sometimes too tired to sleep, up again at 4 next morning, and repeat month in and month out for nine or ten months at a time!

If they could only realize that life—and I have not exaggerated in the least, perhaps then they would not think as they do now. The fact is that farmers are having to work too hard to produce what they are doing, and are old men and women when they ought to be in the prime of life.

Now, sir, if they could get help at a reasonable wage, we not only could produce more, but could do it a great deal more easily, than we are producing what we are now. These long hours would not have to be, and life would be pleasanter and longer. But the way it is now, we can't get the help; it very nearly all goes to the Northwest, where they hold out a bigger money wage. We can't blame the men going after it, but I

doubt very much if we could not outbid them, if everything was taken into consideration—board, free house, garden, wood, church, school and sociability, combined with a reasonable money wage.

Why is it that the laborers all, or nearly all, go to the Northwest? Is it not that the immigration agents are booming the Northwest and belittling Ontario, or, at any rate, leaving her out? Is it not a fact that the English immigrant knows scarcely anything about Ontario? Don't you think, if the English immigrant knew of the home comforts of Ontario, he would come to us and work? Don't you think that if the Ontario Government had good honest men in England, telling the truth about Ontario, that we could get all the help we wanted, or, at any rate, a great deal more than we are getting now?

If the Government could give help in this matter, it would go a long way to helping out of the difficulty both to the farmer and the consumer. What do brother farmers say?

Elgin Co., Ont.

G. A. DISBROWE.

A Song of the Cornfield.

Twelve cows lived in a pasture field
Of June grass and of docks;
There was also a gleam of a silvery stream
That rippled and laughed and talked.

"Now what will you do?" said the stream to the cows,

On the morn of a warm summer day,
"For you know that I nearly up will dry,
And all but vanish away.

"The June grass turns quite red and brown,
The docks they are worse than naught;
You'll walk all night to get a bite,
Oh, I pity your sad lot."

Then Daisy's eyes filled up with tears,
And Princess sighed aloud,
And Beauty that always headed the herd,
Looked neither haughty nor proud.

"Let us go for a walk," said practical Moll,
"And see what we can see;
Some nice green food would be good, indeed,
And help us all out, maybe."

So off they all started to see the crop,
Beauty ahead of yore;
She went right straight to a tumbledown gate,
And looked the hay field o'er.

"There is little here," she said to the rest,
"The hay is very scanty;
I really don't know where next to go,
I fear there is nothing plenty."

"You are 'too pessimistic,'" the two-year-old said,

"To the oat field let us go,"
But no disguise could hide from their eyes
There was nothing there but woe.

The straw was short and far apart,
The heads you would never see;
The poor wet land showed there was no sand
In that man—he was nothing to me.

"Off to the mangel field let us go,"

Cried the two-year-old again;
But all she saw would not fill the maw
Of a hungry brooding hen.

She then lay down and began to cry,
"Oh, why was I ever born?"

"Now shut right up," said Buttercup,
"We will go and see the corn."

Oh, wonder of wonders, what did they see?
A corn field long and wide,
Of nice green corn that soon could be shorn,
And would spell out comfort and pride.

A soft summer breeze came whispering along,
And playfully entered the field;
The corn said aloud as it curtsied and bowed,
"Later on you'll see my yield."

Then it lined up again, and again it waved,
And rolled like the billows of sea;
For a beautiful sight by day or by night,
Oh, corn field, I'll sing of thee.

Some sweet-voiced songsters came winging their way,

But stopped in their happy flight;
In the light of the moon they kissed the corn
As it trembled in glad sunlight.

They rested a while in a near-by tree,
They twittered and chirruped and swung;
They gazed at the sight in pure delight,
And forgot the song they had sung.

Then their little throats swelled and they burst out anew,

Trilling praises of the corn;
And the joyous song was borne along
On the breath of a fragrant morn.

The cows dried their eyes and lay down in the shade,

To chew and muse and dream;
There is little to fear when a cornfield is near,
Is what they all said to the stream.

—A. C. McMORDIE.

A Winter Visitor.

By Peter McArthur.

This week I had a pleasant afternoon with a screech-owl. The visit was forced, and I am not sure that the owl enjoyed it as much as the children and I, but we "did the polite" to it, and I hope it cherishes no hard feelings. A neighbor had caught it in his attic during the cold spell, and brought it to me as a curiosity. Like Poe's raven, it had come in "From the Night's Plutonian shore," but not by way of the window. As nearly as we could figure out, it had entered through an open pipe-hole in an unused chimney, and didn't know enough to go back the way it came. I am not very familiar with screech-owls, but if I am not mistaken this was a somewhat rare specimen. Most of those I have seen in collections were gray, but this one was a reddish-bronze color—of about the same tinge as we see on golden pheasants, and that I remember seeing in the tail and neck feathers of old-fashioned barnyard roosters. I never saw but one screech-owl of this color, and that was one I shot in the old evil days, when I was the proud possessor of an Indian Chief muzzle-loading shotgun. By the way, they do not make guns like that nowadays. I remember that it had a "stubbin' twist" barrel and was "push-bored," whatever those terms may mean. They once meant a great deal to me, and made my gun seem better than any other in the neighborhood. It had a homemade stock of apple-tree wood, and I still rub my shoulder when I remember how it kicked. In those days, nothing that wore fur or feathers was safe from that gun, but we know better now. But, as I was saying, I never brought down but one screech-owl that was colored like our visitor. We consulted the encyclopedia, and found that this kind of coloring is described as "Erythrism—a condition of dichromatism characterized by the excess of red pigment in the plumage of birds which are normally brown, gray, etc." Not finding much nourishment in this purely scientific language, we turned to Nash's bulletin on the "Birds of Ontario," and found that he gives the screech-owl a character that every politician will envy: "Besides its great value as a destroyer of mice and house sparrows, the screech-owl eats a great many large beetles, particularly the wood-borers and May beetles, both of which class of insects are capable of doing much injury if suffered to become too numerous. Grasshoppers also form a considerable part of this bird's diet. The good qualities of this little owl cannot be overestimated: Its food consists entirely of such creatures as are most injurious to the crops, and it has not a single evil habit." He has a lot more to say about it that is equally flattering, but I shall not quote it, as I suppose every wide-awake farmer has a copy of this bulletin. If he hasn't, he should send a post card to the Department of Agriculture, asking for it. It will not only teach him a lot about the value of birds and the necessity of protecting them, but the children will find it as interesting and instructive as the books on Natural History for which they sometimes tease their parents into paying a dollar or more.

After learning as much as we could about our visitor, while it solemnly blinked one eye and then the other, we tried to make a cage from a wire letter-basket and an empty tea-box, so as to keep it for the older boys to see when they got home from school. But our cage was a failure. Suddenly someone noticed that the little owl was flying noiselessly from room to room. During the next few minutes it probably heard more screeching than it ever did in its life, but finally it settled on a picture frame over the portrait of his late Majesty King Edward VII., where it blinked and dozed until evening. Then it had to be captured for closer inspection by the nature student, and resenting this, it managed to sink a couple of talons in his finger, and send him to hunt for the peroxide. When I took over the captive, it tried its beak on one of my fingers, but only managed to give a smart pinch. Then we all looked it over again and stroked its head and little earlike tufts, as if it were a pet kitten. Finally, with the consent of all, I took it out and tossed it into the air. Instantly it flashed away toward the spruce trees, and disappeared. I haven't noticed that the sparrows are any less numerous since then, but perhaps our owl decided to leave a neighborhood where it found things so exciting.

The current number of the Forum has an article telling how the world is to be fixed up when China gets through with her own troubles and has time to attend to our affairs. It seems that there has arisen in the Far East an amiable, slant-eyed philosopher who has outlined a programme for "The United States of the World." His name is K'ang Yeou-Wei, and his scheme reminds me of nothing so much as a recent bulletin on Tuberculosis in Fowls. This reformer purposes to eradicate evil by the simple method of eliminating the evil-doers. Being a believer in the law of Evolution, he would also decapitate the offspring of such

persons, so that the sins of the fathers may not crop out in a future generation. He would rid the world of disease and weakness in the same way, by decapitating the diseased and deformed. Then, with a world composed of virtuous and healthy people, he would reorganize society along rational lines that would avoid all the errors of the uncivilized past. The ghastly part of the thing is that the man who devised this plan did it in all seriousness, and is being taken seriously by a vast number of his countrymen. At one time he was the chief advisor of the Imperial court, and was progressing briskly with his reforms before wicked old Tsi An decided to decapitate him. Unfortunately, he escaped. I note with interest that the philosopher insists on the members of his rejuvenated human race being "handsome, intelligent and healthy." It would be interesting to get the opinions of some of our most eminent men on this phase of the plan. Many of them could qualify for citizenship in the new state on the score of being intelligent and healthy, but how would they fare when their beauty was considered? I am afraid it would go hard with some of them. But the whole thing seems more like a weird satire by Swift or Voltaire than like a scheme earnestly proposed by a rational human being. Scientific methods are all right when applied to a herd of dairy cows or a flock of hens, but they need to be modified considerably before applying them to human beings. The whole thing goes to show that even so good a thing as scientific development can be pushed too far. It is to be hoped that K'ang Yeou-Wei does not emerge from the present struggle with a backing of four hundred and fifty million Chinamen, all eager to reform the race. The Forum article closes with this ominous sentence: "The famous name of K'ang Yeou-Wei has aroused a deep feeling of interest in favor of his work; the great ideas on which it rests have been acutely appreciated; thanks to their thoroughly Asiatic aridity of soul, Chinese readers have not been alarmed by the sort of existence which the World Republic promised them."

* * *

There is one phase of farm life, as compared with city life, that I have never seen brought out: The approach of spring—not that I have noticed any signs of it yet, except in the almanac—reminds me that the farmer is the one worker who is given a fresh chance every year. If he made mistakes last year, he can avoid them this year. He can start each spring with a new lot of good prospects. With the city man it is different. There is only one spring season for him. The mistakes he makes in starting may hamper him all his life. The seasons and the changing years mean little to him. He must start with a clearly defined idea of what he is to do for the rest of his life, and push towards his goal without intermission. He has only one seedtime and one harvest. Of course, there are many city men who make a fresh start after a failure, but the city ideal is to make one start and then go straight ahead. Of course, the farmer has to stick to farming, but not to the same kind. If he finds that raising corn or tobacco would suit him better, or make more money than raising wheat and oats, he can make the change any spring, without being troubled with any sense of failure. If he does fail, he can start all over again any year without ever closing his place of business. There are so many avenues to success on the farm that every man should be able to choose the kind that pleases his own taste. His work need never take on the deadly monotony that is the curse of so much city work. Not only the man who is working with a machine, but the man who sits at a desk, must adopt a regular routine that he will follow day after day for the rest of his working life, if he hopes to succeed. On the farm it is entirely different. Why, a man can even "farm" with a typewriter, as one Toronto editor was mean enough to say, but I'll get even with him some time.

The True Magnet.

Discussing the present status of agriculture at the Ontario Agricultural and Experimental Union, lately, Hon. Nelson Monteith delivered himself of these undeniably correct observations: "Men are leaving the land, and at the same time more young men are coming here (the Ontario Agricultural College) to learn how to take more out of the land. What is the conclusion to be drawn? It seems to me it is too early to say there is a revival in agriculture, although there is undoubted evidence of increasing interest in scientific agriculture. We are seeing intensive farming more generally adopted, co-operation more widely applied, and our public-school system is being shaped in some measure to create in people a love of their surroundings. This latter is one of the most hopeful features in connection with the propaganda for agricultural advancement."

Still, I fear that, so long as dollars and cents alone make appeal, there is not much ground to hope for a real revival in agriculture. Those for whom money presents the one great attraction

will naturally be drawn to the cities where great fortunes are accumulated. It will not be until our schools present before the minds of the young the attractions, in the way of home life and the beauties of nature, which are to be found in the country, that a genuine revival in agriculture can be looked for."

Farming and Globe Trotting.

Editor "The Farmer's Advocate":

I have often read your discussions on hired help, and as often been tempted to answer some of the slurs on "Blooming Englishmen," but till now have refrained, but, reading Agricola's complaint, can hold myself no longer. It seems to me that if he had held on to the money he has spent in travelling, he would now be in the position he is asking the Government to put him in. He starts by mentioning "boasted" education. Granting that the average boy leaves school between the ages of fourteen and fifteen, should we eradicate the very elementary arithmetic and other knowledge he acquires in that short space of time? Surely that is not qualifying him for a doctor, lawyer, etc. Can anything make a boy more broad-minded than to receive the same education as the city boy, whilst at the same time receiving a most practical farming education from his earliest infancy? It seems to me he has the advantage of the city boy. It is this education which breeds ambition. What boy is willing to work at home for board and pocket money when he knows full well there is eight or nine hundred dollars per year in good farming? Youth fails to see obstacles. Take "Weldwood," for instance, it is not unreasonable for a young man to argue that, if you calculate to earn a good profit, and possibly create a sinking fund every year, after paying the heavy wages' bill and other expenses, he can do likewise, knowing his knowledge comes from the same source as yours, if he cares to read it. As Mr. Young says, "Ambition is the moving force." A farmer's son cannot, as a rule, become a member of any profession without his father's help and consent, so why blame education? The more of it we possess, the better for this world.

"Agricola" can also show the immigration authorities how to run their business. Supposing it were possible to bring out every farm laborer in the Old Country, how much and for how long would it help the labor problem? No, sir, you cannot do without the city immigrant, and who would argue that the brains of the builder and other mechanics, and even pen-pushers, are not as capable of grasping farm work and problems as the mind of "Agricola" or any other farmer? Why do farmers hire them? There is no choice, and if the temper of the farmer is tried at times, surely the poor immigrant pays dearly for his experience the first year or two. In fact, it is this hard experience which helps to fill the towns, for I venture to say that, if figures were available, it would be found that quite a third return to town every year.

"Agricola" laments the fact that very few friends of his ever came to Canada. Well, perhaps they, like everybody else, have a decided objection to snobs, for surely he must be one to designate the majority of city immigrants "gaol-birds, slick Cockneys, scum, etc." If he cares to make inquiries at Ottawa or Toronto, he will find the consensus of opinion to be that a more desirable body of immigrants never came over than last year's. The majority of skilled farm help that emigrates prefer Australia, I believe, because of the more open climate, government loans and other financial help accorded them. I know for a fact that Canada is up against a very energetic rival in Australia in the bidding for immigrants.

Perhaps the exodus to the West does not mean the collapse of Ontario, after all. The figures look alarming, but figure it out this way: A farmer has three or four boys. Well, time comes when they must be doing something, and it is not always possible to set them up near home, so I suppose they think they may as well go West as five twenty miles away. It's not always a question of money, for I guess most of them purchase improved farms, and we hear such wonderful stories of the West that it is bound to prove a great lure, anyway.

Of course, there is no doubt that financial help by the Government would be a great boon, and set many a man on his feet, and I, for one, would like to see such action; but the Government will certainly expect that every applicant be able to show a banking account of at least five hundred dollars, and the immigrant, whether he be a farmer's son or other hired help, who cannot show such an amount in four or five years is a risky investment for public money. I think, if Mr. Young hunted up other parts of the Province, he would not find any great difficulty in renting a farm, and his experience should be that of every immigrant who cares to work steady on a farm, and not go globe-trotting.

Huron Co., Ont.

A TRUE COCKNEY.

A Record Clydesdale Meeting.

Clydesdale breeders in great numbers assembled at the King Edward Hotel, Toronto, Friday, Feb. 2nd., it being the annual meeting of the Clydesdale Association of Canada. John Bright, of Myrtle Station, who had been president of the Association for the past four years, reviewed the work accomplished by the Association in the past. The Clydesdale Association of Canada stands predominant amongst all the live-stock associations of America, said Mr. Bright, and predominant over all Clydesdale associations in the world, not excepting the parent association in Scotland. In view of the fact that the financial statement showed such a large amount of surplus cash on hand, Mr. Bright urged that more money should be devoted to show-yard premiums, and that the Association should give more liberally to the exhibitions held in the outlying Provinces. He pointed out that Ontario's success depended largely on the success of the Western Provinces, because Ontario breeders reap the benefit of the success in the West, which makes a better market for our horses.

Mr. Bright also referred to the successful attempt on the part of the Canadian breeders in 1907 to make the Clydesdale Association of Great Britain and Ireland agree to number the dams recorded in their book. This has been an unqualified success and a great boon to the breed, and now the Scotch papers, said Mr. Bright, declare that the Canadian Clydesdale Association did wonders for the parent association by getting this rule established.

Penalty fees for not registering animals until after a year old have been to some extent responsible for the large surplus. The new form of tabulated pedigree, for which \$2 has been charged heretofore, also proved a valuable aid in increasing the assets, and the president was in favor of lowering this rate.

STALLION LEGISLATION.

The urgent need of some form of legislation in Ontario which would govern the use of stallions standing for service was brought vividly before the meeting by R. E. Gunn, of Beaverton, Ontario, said Mr. Gunn, is believed to be the banner horse-breeding Province of the Dominion, yet we have no stallion legislation, while Manitoba, Saskatchewan and Alberta all have statutes requiring that all stallions standing for service must be inspected, and registered sound. He counted it a disgrace to Ontario not to have such a law, which would also make it necessary that each stallion's breeding be published before he could stand for service. Manitoba must be recognized as the premier Province in this particular, because she was the first to institute such legislation.

The Stallion Legislation Bill, which was brought before the Ontario Legislature in 1908, was read and discussed by Mr. Gunn. This bill, which was for some reason thrown out at that time, would make inspection imperative, and covers the ground thoroughly. The speaker thought it strange that the Minister did not seem willing to initiate a movement which had behind it the prestige of all the horsemen in the Province.

A resolution was moved by R. E. Gunn, and seconded by Wm. Smith, that the Clydesdale Association of Canada memorialize the Ontario Horse-breeders' Association, in the best interests of horse-breeding, to see that the Minister of Agriculture be waited upon, and, if possible, be induced to pass the bill as laid down in 1908. The resolution carried unanimously.

REDUCTION IN COST OF EXTENDED PEDIGREES.

The intimation made by Mr. Bright, that it might be advisable to lower the charge for extended pedigree forms, brought forth much discussion. It was concluded to reduce the prices from two dollars to fifty cents. Some of the Western horsemen asked if it would be possible, on the present short pedigree blank, to extend the pedigree two generations, thus giving horse-buyers a clearer idea of the breeding of the animals offered. The reduction in price of the full extended pedigree disposed of this question.

FINANCIAL STATEMENT.

The financial statement was presented by Secretary Wheaton, and showed a balance on hand of \$14,393.82. The receipts included fees from 1,531 members, at \$2 each—\$3,062. This shows an increase in membership the past year of 237. The total assets are \$17,353.82, and liabilities, \$1,475, leaving an excess of assets over liabilities of \$15,878.82, or \$1,861.94 increase over a year ago. While, a few years ago, the Dominion Shorthorn Breeders' Association was the richest live-stock association in Canada, and while that association is still the strongest in membership, Mr. Bright stated that it was now forced to yield to the Canadian Clydesdale Horse Association the palm as being the strongest live-stock association in Canada financially.

OFFICERS.

Mr. Bright made it plain in his address that he would not be a candidate for re-election as president of the Association, or for any position on the directorate. He was then asked to vacate the chair, and, on motion of R. R. Ness, seconded by Wm. Smith, he was made a life-member of the Association. Robert Graham, of Bedford Park, was elected President; Vice-President, John A. Boag, Queensville; Ontario Vice-President, Peter Christie, Manchester (other Vice-Presidents for Provinces, are elected by ballot). Directors—Jas. Torrance, Markham; Wm. Smith, Columbus; Walter Milne, Green River; T. D. Elliott, Bolton; Wm. Graham, Claremont; A. G. Gormley, Unionville; Jas. Henderson, Belton.

Shire Men in Session.

The Canadian Shire Horse Society held its annual meeting at the King Edward Hotel, Toronto, on Friday, Feb. 2nd. The President, John Breckin, in his opening remarks, recommended a more liberal grant of the Society's funds for prizes at the leading shows, believing it would be a stimulus to Shire breeders to make a much larger entry, which could not but result in benefit to the breed. The Secretary's report was a most encouraging one, and showed marked progress all along the line, with increased membership, increased registrations, increased transfers, and increased finances. During the year there were imported from Great Britain 30 stallions and 34 mares, the majority going to Western Canada, where the Shire is rapidly getting a foothold as the ideal draft horse. Total receipts for the year were \$1,099.42, and the cash balance on hand \$840.56, which is the strongest showing the Society has ever made.

On motion, it was decided to substantially increase the salary of the capable secretary-treasurer, G. de W. Green, the increase amounting to about double the salary formerly paid. The grants to the breeding classes of the several fairs were: Ontario Winter Fair, \$50.00; Canadian National, \$35.00, and \$20.00 each to the following shows: London, Ottawa, Winnipeg, Saskatoon, Edmonton and New Westminster.

Election of officers resulted as follows: President, D. Messenger, Guelph; Vice-President, Andrew A. Miller, Middlemarch. Directors—John Breckin, Appleby; C. E. Porter, Appleby; John Gardhouse, Highfield; J. M. Gardhouse, Weston; James Henderson, Belton; A. Agar, Nashville; and W. Alcorn, Pricoville. Representatives to Exhibitions—Toronto, J. M. Gardhouse; London, Andrew A. Miller and James Henderson; Ottawa, Geo. Fletcher, Oxford Mills; Saskatoon, W. A. Silverwood, Saskatoon; Ontario Horse-breeders' Association, John and J. M. Gardhouse.

Standard-bred Men Meet.

The annual meeting of the Canadian Standard-bred Society, held at the Prince George Hotel, Toronto, on Thursday, February 1st, showed the members to be most optimistic of the future of the Society. In the short time since the incorporation of the Society, it already stands third among the various horse societies of Canada in number of registrations, there being, for the last year, the splendid showing of 302 registrations, and a rapid increase in membership. In the absence of the President, O. B. Sheppard, the chair was taken by the Vice-President, J. W. Allison, whose opening remarks were in a most hopeful vein for the future of the society. With care in the running of the Society, it could soon be made one of the most important in the Dominion. On motion, a committee was named to confer with the various driving clubs of the country, with the object of forming an association, drafting rules, etc., for the control of all race-meets in Canada, the view being generally expressed that Canada was now big enough to take charge of her own meets, without the help of any outsiders.

The Secretary's report showed the cash balance on hand of \$1,045.60, when the following grants were made to the breeding classes of the several exhibitions: Winnipeg, \$100; Regina, Edmonton, Vancouver, Toronto and Ottawa, \$50 each.

The election of officers resulted as follows: Hon. President, Robt. Davies, Toronto; President, O. B. Sheppard, Toronto; Vice-President, J. W. Allison, Morrisburg; Secretary-Treasurer, J. W. Brant, Ottawa. Directors—Dr. W. E. Baker, Hamilton; H. Ashley, Foxboro; W. J. Cowan, Cannington; Alderman S. McBride, Toronto; Geo. Pepper, Toronto; John Baldwin, Killarney, Manitoba; R. W. Davies, Toronto; H. S. Pierce, Stanstead, Que.; Dr. A. W. Bell, Winnipeg; W. C. Renfrew, Bedford Park; J. M. Gardhouse, Weston; P. Weatherhall, Baldwin. Auditor—Geo. L. Hatch, Ottawa.

Hackney Men in Session.

The annual meeting of the Canadian Hackney Horse Society was held at the Prince George Hotel, Toronto, on the evening of February 1st, a large number of members being present. President W. H. Gibson, of Beaconsfield, Quebec, was in the chair. The Secretary's report showed the Society to be in a strong, healthy condition, with a cash balance on hand of \$1,283.36. On the election of president for the current year, the past vice-president, J. W. Allison, of Morrisburg, Ont., was duly installed to fill that honorable position, and, on taking the chair, in a few well-chosen words thanked the members for the honor, and assured them of his intention to do all in his power to further the interests of the society, and asked the co-operation of every member. Hon. President, W. H. Gibson; Vice-President, A. E. Yeager, Simcoe, Ont. Directors—Harry Boag, Barrie; E. Watson, Hudson's Heights, Que.; T. A. Graham, Claremont; E. C. H. Tisdale, Beaverton; Hon. Robert Beith, Bowmanville; Walter Renfrew, Bedford Park; John Bright, Myrtle. Vice-Presidents for the Provinces—Quebec, T. B. Macaulay, Montreal; Maritime Provinces, W. W. Black, Amherst; Manitoba, John Graham, Carberry; Saskatchewan, R. Taber, Condie, Alberta, W. J. Stark, Edmonton; British Columbia, M. Mitchell, Victoria. Representatives to Fair Boards—Canadian National, T. A. Graham, Claremont; London, Wm. Mossie, St. Mary's, and J. R. Thompson, Guelph; Ottawa, C. W. McLean, Brockville, and W. A. Ross, Ottawa; Winnipeg, John Wishart, Portage La Prairie, and John Graham, Carberry. A motion was passed, and carried unanimously, that a memorial be prepared by this Association, and forwarded to the Minister of Agriculture at Ottawa, urging him to retain the services of Dr. J. G. Rutherford as head of the Live-stock Branch at Ottawa. During the discussion on this question, many flattering things were said of the able and efficient way in which the interests of the live-stock breeders of this country have been looked after by Dr. Rutherford.

Ontario Horse Breeders.

Owing to the fact that the banquet given by the Horse-breeders to the Live-stock men conflicted somewhat with the annual meeting of the Ontario Horse-breeders' Association, held at the Walker House, Toronto, Friday, February 2nd, 1912, the said meeting's business was rather hurriedly disposed of. The financial statement showed the business to be in a healthy condition. R. E. Gunn, of Beaverton, brought up the question of stallion legislation, which was discussed at the meeting of the Clydesdale Association, a report of which appears in this issue. The matter was left in the hands of the directorate.

Officers Elected.—The following are the officers of the Ontario Horse-breeders' Association for 1912: President, Wm. Smith, M. P., Columbus; Vice-President, John A. Boag, Queensville; Secretary, A. P. Westervelt, Toronto. Executive Committee—Wm. Smith, John A. Boag, A. P. Westervelt; John Gardhouse, Highfield; John Bright, Myrtle Station. Directors—From the Canadian Clydesdale Association: Wm. Smith, Columbus; John A. Boag, Queensville; John Bright, Myrtle Station; Geo. Gormley, Unionville; Wm. Graham, Claremont; Jas. Torrance, Markham; Jas. Henderson, Belton; Walter Milne, Green River; T. H. Hassard, Markham; Peter Christie, Manchester; Robert Graham, Bedford Park; A. C. Major, Whitevale; T. D. Elliot, Bolton. From the Canadian Shire Association: John Gardhouse, Highfield; J. M. Gardhouse, Weston. From the Canadian Hackney Society: Walter Renfrew, Bedford Park; C. Wesley Allison, Morrisburg. From the Canadian Thoroughbred Association: Wm. Hendrie, Hamilton; Robert Davies, Toronto. From the Canadian Standard-bred Society: Geo. Peffer, Toronto; O. B. Sheppard, Toronto. From the Canadian Pony Society: H. M. Robinson, Toronto; T. A. Cox, Toronto. From the Canadian Percheron Association: E. C. H. Tisdale, Beaverton; C. Hawthorne, Simcoe.

Pony Men Meet.

The annual meeting of the Canadian Pony Society of Canada was held at the Prince George Hotel, Toronto, on the evening of January 31st, the President, A. E. Major, in the chair, who, in his annual address, spoke of the flourishing condition of the Society and the increased and widespread interest taken in ponies by the public generally. The annual report showed the past year as being by far the most prosperous the Society has ever experienced since its inception, and the Society to be on a sound financial basis, with a cash balance on hand of \$252.56. Considerable discussion arose over a request by the Aberdeen Pony Society, asking that the Canadian Pony Society do not recognize the Shetland Island Stud-book. It would appear, from data gathered that the Aberdeen Pony Society is a private or close corporation who are ambitious to control the en-

ture policy of the British Isles, but the opinion was general among the members of the Canadian Pony Society that the Shetland Islands, being the origin of the breed, the studbook of the Islands should receive recognition, and the decision of the meeting was to that effect. A pleasing feature of the meeting was the presentation to the retiring secretary-treasurer, W. J. Stark, of a leather travelling bag, in recognition of his valuable services in forwarding the interests of the Society. Mr. Stark is leaving to take the management of the Edmonton Exhibition. It was decided to present four medals for competition to the Canadian National Exhibition for Hackney and Shetland ponies, and two each to Winnipeg, Montreal and Guelph shows. The election of officers resulted as follows: Hon. President, A. E. Major, Whitevale; President, T. A. Cox, Brantford; 1st Vice-President, C. Lovejoy, Toronto; 2nd Vice-President, W. J. Langton, Toronto; Secretary-Treasurer, G. de W. Green, Toronto. Directors—Robt. Graham, Bedford Park; T. McGillivray, Whitby; A. Taylor, Toronto; James Miller, Brantford; J. M. Gardhouse, Weston; H. M. Robinson, Toronto; J. W. Allison, Morrisburg; C. Stone, Toronto; A. Milne, Green River; W. C. Renfrew, Bedford Park.

Would Encourage the Breeding of Thoroughbreds.

It was a large meeting which assembled at the King Edward Hotel, Toronto, on February 2nd, to elect the governing body for the Canadian Thoroughbred Horse Society for 1912, but all those present were optimistic and enthusiastic regarding the future of their favorites. President Wm. Hendrie, of Hamilton, pointed out that the Provincial Government of Ontario had placed a tax of \$200 per day on every race meeting held in the Province, which impost, in 1911, brought in \$14,000 revenue. He stated that, from a breeding and agricultural point of view, this money, coming, as it does, from the Thoroughbred breed, should be used to improve the Thoroughbred sire for use on our light, comparatively cold-blooded mares. A resolution was passed that a deputation be appointed by the president to wait upon the Government to ask that this money, or a part of it, be used to the improvement of the Thoroughbred sire in Ontario. It was the earnest wish of the meeting that this money, as well as all that given in premiums, should go to the advancement of the breeding, rather than the speed end of the Thoroughbred business. Premiums should only be given to stallions standing for service at a reasonable fee, in the locality where shown, and to horses of good size, conformation, soundness and quality.

The total receipts of the society during 1911 were \$1,636.95, with disbursements of \$1,274.00; balance on hand, \$1,234.20.

The number of registrations, by Provinces, showed that the Western country is increasing its numbers of the breed faster than the East. Ontario showed 115 registrations in 1910, and 114 in 1911; Manitoba, 12 in 1910, and 3 in 1911; Saskatchewan, 11 in 1910, and 11 in 1911; Alberta, 14 in 1910, and 64 in 1911; British Columbia, 27 in 1910, and 45 in 1911; Quebec, 33 in 1910, and 36 in 1911; New Brunswick, 12 in 1910, and 3 in 1911.

RULES OF ENTRY.

A new list of rules of entry was submitted by J. W. Brant, and adopted:

1. The following may be admitted to registry:
 - (1) Animals whose sires and dams are recorded in the Canadian Thoroughbred Studbook.
 - (2) Animals recorded in the English General Studbook.
 - (3) Animals recorded in the American Thoroughbred Studbook.
 - (4) Animals recorded in the French Thoroughbred Studbook.
 - (5) Animals recorded in the Australian Thoroughbred Studbook.
 - (6) Animals recorded in the Thoroughbred Studbook of any country wherein certificates of such registration are issued and are received and accredited as authentic and sufficient for purposes of record or registration in any of the above-named Studbooks.
 - (7) Animals foaled in Canada whose sires and dams are registered in any of the above-named studbooks.

Note—Animals bred in any American country are not considered as imported.

MEMBERSHIP AND REGISTRATION FEES.

Following are the scale of fees: Life membership, \$25; annual membership, \$2.

Registration Fees—(1) Canadian-bred animals. To members. Each registration, if animal is recorded in the year in which it is foaled, \$1.00; each registration of animal is recorded after the 31st day of December of the year of foaling, \$5.00. Each transfer, \$2.00. (2) Imported animals. To non-member, \$5.00. (3) Certificate, \$1.00.

- (2) Animal—Product of Canada, born in

less, each registration, \$2.00; to non-members, each registration, \$4.00.

OFFICERS.

President, Wm. Hendrie, Hamilton; Vice-President, A. E. Dymont, Toronto; Second Vice-President and Secretary-Treasurer, J. J. Dixon, Toronto. Directors—A. E. Ogilvie, Montreal, Que.; Col. D. McCrae, Guelph; T. Crowe, Toronto; Raymond F. Dalrymple, Qu'Appelle, Sask.; W. J. Taylor, Victoria, B. C.

Live Stock Breeders' Banquet.

The horse-men gave a complimentary banquet to the live-stock breeders of Canada at the Walker House, Toronto, on February 2nd. A large and representative gathering responded to the invitation, and a most enjoyable evening was spent by all. Wm. Smith, the well-known horseman and Member of Parliament for South Ontario, occupied the chair. "The King," "The Parliament of Canada," "Agriculture," "The Live-stock Industry," and "The Press," were the toasts proposed by the toastmaster, and Hon. Martin Burrell, Hon. Jas. Duff, Hon. Thos. Crawford, N. W. Rowell, Joe Downey, W. A. Clark, Donald Sutherland, Alex. McGowan, W. F. McLean and Geo. Gooderham were among the chief speakers. The importance of the live-stock industry to agriculture and to the country was the theme of nearly all the speeches.

Tilbury and the Corn Show.

"Where is Tilbury? I'm not sure that I know. Somewhere between Hamilton and Windsor, I guess. And what is Tilbury? Really, I can't say. It may be a township or it may be a town, for all I know."

If people would be honest, and admit it, such are something like the thoughts that will pass through the minds of the majority of our readers, even those of Ontario, when they read the heading above. Tilbury is both a township, or, rather, townships, and a town. The town of Tilbury, where the Corn Show was held, is on the border line between the Counties of Essex and Kent, the townline road forming the main street of the town. It is the center of the splendid farming section of country lying between Chatham, Windsor, and the towns of Leamington and Essex, and has a population of about 1,500. Its merchants have the reputation of doing business with a very wide circle of farmers indeed, and of giving special consideration to the interests of their customers. The largest store is that of W. C. Crawford, the energetic mayor, who was one of the most active in having the show held in Tilbury.

At the merest glance, one can see that Tilbury is prospering. Buildings that have been put up lately, whether for business or for residence, seem bigger and better than present requirements demand. It is served by two railroads, the Michigan Central and the C. P. R. There is a good system of waterworks, the water being brought from Lake St. Clair. Natural gas from a field seven to ten miles distant, used to heat and light the town, is supplied at the low rate of 25 cents per 1,000 feet for domestic use, and 12 to 15 cents for manufacturing purposes.

One can see no reason why Tilbury should be built just where it is. The special fitness of the sites of Quebec, Montreal, Toronto, Hamilton, and even London, are self-evident. But, to all appearance, if Tilbury had been placed a few miles off in any direction the site would have been just as suitable. As far as the eye can see, the whole country is on a dead level. A native may be able to tell which way the water would run, but it would certainly puzzle the stranger to do so. But the soil of this level country is simply superb, and very easily drained, as well. Joined with a climate tempered by the surrounding lakes, it furnishes ideal conditions for the growing of many varieties of dent corn. As is well known, Essex County is the most exclusively corn-growing district in Canada, but, as the adjoining County of Kent is also largely devoted to the corn crop—though the specialty of the Eastern portion of it is beans—and as corn is grown for the grain quite extensively in Lambton and Elgin Counties, as well, the claim of Tilbury as being the center of the corn belt is not so far-fetched.

Serious doubt as to the farther claim of the Tilburians that their town was a proper place to hold the Corn Show had been entertained by many, but the town singly outshone itself in making preparations for the exhibits and for the accommodation of visitors. A section of a large rink had been turned into an audience chamber for lectures, and the remainder into an exhibition building. It was corn on the shelves, corn on the table-napkins, corn on the decorations, and corn in the store windows. In one window was an extra touch. In addition to the corn they men had were three little pigs, a spotted one, and two that were white. So hearty was the welcome given, the fact being that appreciative remarks

were heard everywhere, and a vote of thanks as hearty as the welcome was tendered the mayor and council at the annual meeting of the Association.

Interest in the annual Corn Show is still on the increase. Thronging crowds poured into the town every one of the three days that exhibits were shown—not listless, but live people, people who had worked in corn all their lives, and to whom no other subject seemed quite so attractive. It was a great social event, also. Men, women and children were there, and many old acquaintances were met and new ones made. A hearty jollity, a buoyant tone was observable all through. There seemed to be a general feeling that Canada was a good country, a tip-top country, and that it was getting better all the time.

Wednesday, Jan. 31st, was the first day the exhibits of corn were open to the public, the Tuesday previous, though classed as one of the show days, being given up to the receiving and placing of samples entered for competition. In addition to the various classes open to all, each township in the two counties offered a list of prizes to corn exhibits grown within its boundaries. There was also a section for boys and girls where no adult could compete, and in no department of the show was the interest keener or better sustained. The most attractive display of all was that brought out by the prizes offered to Farmers' Clubs or Institutes for the finest piece of decorative work done in corn. Among others, Tilbury East showed a double-decked structure, in which was to be seen a farm steading—house, barn, corner, and lawn, complete—all done in cob or kernels of the golden grain. One feature of this erection that specially tickled the children was the fact that the house chimney was always smoking. The Darrel Farmers' Club had a map of Kent County, with outlines and names in corn; and there were pyramids and half-pyramids of corn-cobs, many varieties, shown by the townships of Romney, Chatham, and others.

What seemed to draw the crowds even more than the corn exhibits themselves were the meetings, addressed by eminent speakers, which were held morning, afternoon and evening during the three days that the show lasted. The morning sessions were held in the Oddfellows' Hall, under the direction of Prof. L. S. Klink, of Macdonald College, Quebec, who gave most instructive addresses on "Corn Selection," with practical work. The afternoon meetings were held in the rink, which would seat 800, and were addressed by Prof. A. E. Chamberlain, St. Paul, Minn.; Prof. W. H. Davy, O. A. C., Guelph; Prof. S. B. McCready, O. A. C., Guelph, and Prof. Klink, on such subjects as "Corn-growing for Profit," "Under-drainage," "Alfalfa as a Soil-builder and Forage Crop," "Our Schools and Agriculture," and "Improvement of the Corn Crop." The president of the Ontario Corn-growers' Association, J. H. Williams, was chairman at these gatherings.

The evening meetings were also held in the rink, and were of a more popular character, the speeches of such men as G. C. Creelman, President O. A. C., Guelph; Prof. J. H. Grisdale, Director Dominion Experimental Farms; Prof. Klink, and others, being interspersed with music and readings. His worship Mayor Crawford presided at these evening gatherings, and made snappy, optimistic speeches. Something of an old-world flavor was given to the proceedings on Wednesday evening, when Mayor Crawford, at the conclusion of his address of welcome to the corn-growers, formally presented President Williams with the key to the city. Tilbury has no gates, but if it had any, the key in question was certainly big enough to open them. Mr. Williams, who, with due humility and gratitude received the key, will probably use it as a club around home.

The rink was well filled at all the afternoon and evening meetings, and often the standing room was utilized. Fully two hundred people more than could be seated stood throughout one entire session. In addition to the regular morning gathering addressed by Prof. Klink, a meeting for school children and teachers was held on Friday forenoon, and addressed by Prof. McCready. The afternoon session of that day was also specially for children, but, while there was a fine crowd of children present, with a good representation of teachers interspersed, the remaining space was packed by men and women to whom school days were but a memory.

At the annual meeting of the Corn-growers Association, which was held Thursday evening, Feb. 1st, a prosperous condition of its affairs was reported by the treasurer and secretary. An invitation to hold the next annual corn show in the city of Windsor was given by a representative from that place, but the decision of the directors as to that will not be known for some time.

Election of officers resulted as follows: President, J. H. Williams, Fletcher; 1st Vice-President, Byron Robinson, Wheatley; 2nd Vice-President, R. W. Knister, Comber; Secretary, W. E. J. Edwards, B. S. A., Essex; Treasurer, J. H. Coatsworth, Ruthven; Hon. President, J. O. Duke, Ruthven. These form the Executive, and

this body in turn appoints one director from each township, who with them constitute the full board.

We purpose giving in later issues synopses of several of the excellent addresses delivered, in the meantime quoting, as below, some of the nuggets only:

"No person can be awakened to enthusiasm on any subject on which he has no knowledge."—Prof. Klinck.

"If, as a result of these discussions, we know a little more what to look for as we work in our cornfields next summer, and put an interrogation mark after things we notice but cannot explain, we shall have profited."—Klinck.

"The feeding value of corn is not determined by its color."—Klinck.

"The sun doesn't shine on a spot in the American continent that is capable of greater development than South Western Ontario."—Chamberlain.

"To maintain the fertility of our soils, we must get our heads into the game."—Chamberlain.

"Corn is a gross feeder, but not a good feeder."—Klinck.

"There are ten million acres in Ontario that need drainage."—W. H. Day.

"Underdrainage is one of the great problems of Ontario."—Day.

"An opportunity is all that anyone has a right to, all that anyone should ask for."—Chamberlain.

"I acted for several years as a criminal lawyer. I never saw and I never knew a man or woman who had formed habits of industry, and kept them up, who ever deliberately committed a serious crime."—Chamberlain.

"Man is naturally a soil robber."—Chamberlain.

"The farmer who waits for rain to start his crop is not the best kind of a farmer."—Chamberlain.

"A New Ontario is being built in Old Ontario just now."—Prof. McCready.

"Nature study means better children, better farmers."—McCready.

"Clover sod for corn every time."—Klinck.

Important Convention: Nova Scotia Farmers.

The most successful and important annual session of the Nova Scotia Farmers' Association convened in Yarmouth, N. S., on Tuesday, Jan. 23rd to 26th. The Yarmouth County Farmers' Association and the citizens of Yarmouth entertained the delegates royally. Never before in the history have we received such a warm and hearty welcome. Lunches, music, readings, solos, quartettes, free drives, and addresses of welcome and free tickets to the theatre interspersed the more strenuous business of the meetings. Yarmouth has indeed set a pace in welcome and entertainment that will be almost impossible to follow.

There were some five hundred persons in the hall to hear the annual address of the President and the warm addresses of welcome. Other speakers of the evening were B. B. Law, M. P.; Messrs. Ritch and Barr, of the Department of Agriculture, Ottawa, and Principal Cumming, of the Agricultural College, Truro.

The report of the Exhibition Commission provoked long discussion, participated in by a large number in the audience. Though many criticised the Provincial Exhibition at Halifax on the ground of its non-success financially, its poor advertising power, and the length of time it was held, involving that the small exhibitor was in attendance at a great expense, etc., still very few suggestions for improvements were advanced. C. H. Eaton, of Port Williams, advocated a larger prize list for grade steers, with less prominence given to pure-breds. It was finally decided that the exhibition was a necessity, and a resolution was passed endorsing the work of the Exhibition Commission, and advising its continuance.

Reports of County Associations showed that there had been fewer meetings and a decreased membership during the year.

F. L. Fuller reported a total of 200 agricultural societies in the Province, with a total membership of 8,500. These societies received from the Government a grant of \$12,000, and had subscribed about \$13,000.

On Wednesday afternoon Principal Cumming gave an address on Horse-breeding Legislation. To get the best results Provincially, farmers should use nothing but approved pure-bred sires, but the passing of such a law at the present time would be found too stringent, though we surely needed something in this line. The law in France divides the stallions standing for service into three general classes. They are all examined by competent veterinary surgeons, and, if perfectly sound, are given a bonus; if with minor defects, they are given a certificate; and if still less desirable, may be allowed to serve. In Wisconsin, every stallion standing for service must be inspected, and enrolled in the State College of Agriculture. The scrub, unsound stallion is not barred from service, but all horses must be labelled 'true to con-

dition. Every advertisement or description of stallion must be headed with the statement as to whether he is (1) pure-bred, (2) grade, (3) cross-bred, (4) non-standard-bred, or (5) mongrel or scrub. The audience seemed strongly in favor of legislation, passed at once, similar to that in force in Wisconsin. Messrs. Fuller, Black, MacMillan and Nicholson were appointed a committee to draft a law.

J. H. Grisdale followed in an address on the value of proved sires. It is a regrettable fact that only a small per cent. of sires are kept until their progeny is old enough to show what kind of a stock-getter the sire was. Especially is this true of bulls and rams. The essentials in a good sire are that he must be impressive or able to transmit his desirable qualities to his offspring; that he must be fertile, and that he must be of good conformation.

With the aid of a couple of charts, G. H. Barr, of the Dairy Division, showed the comparative drain of fertility by marketing the farm produce, etc. Two hundred dollars worth of hay takes about fifty dollars from the soil in fertility, while, as the other extreme, \$200 worth of butter only takes about 25c. worth of fertility from the soil. He also showed, in the same graphic manner, the waste of butter-fat caused by not washing the separator every time it is used, by separating milk too cold, and by running the separator when it is out of order, etc.

Prof. E. S. Archibald, of the N. S. Agricultural College, gave a very instructive address on the subject of winter dairying. He advised having cows freshen from October to January, then the attention and feed could be more uniform, and the milk flow kept up pretty well until spring, when the cow would get a fresh start on the spring grass, keeping up the flow until drying-off time in summer, when dry pastures and flies proved such a detriment to the spring-freshened cow. From experiments and records at the farm, he had found that winter dairying gave from 12 per cent. to 21 per cent. more profit than summer dairying. As further factors to be considered in favor of having cows freshen in the fall, he mentioned the greater ease in keeping milk and milk products, the fact that it is easier to rear calves, with less fear of digestive troubles. In the Maritime Provinces, where roots can be raised so easily, it is possibly as well to provide plenty of these for the succulent part of the ration, especially where it is found difficult to raise corn for ensilage.

In his address on "Treatment of Soils," on Thursday evening, J. H. Grisdale made the following points: Any soil will grow good crops if drained and properly and intelligently cultivated. All successful farming depends on intelligent and systematic rotation. For a seeding, he recommended 8 pounds red clover, 2 alsike, 7 alfalfa, and 12 timothy. This introduces alfalfa and slowly inoculates the soil with bacteria, and makes it more possible each year to grow this plant.

OFFICERS.

President, R. M. Jackson, Cape Breton; First Vice-President, H. W. Corning, M. P., Yarmouth; Secretary, C. R. B. Bryan, Pictou. Directors—R. J. Messenger, A. S. Macmillan, D. MacDonald, S. Truman, E. R. Nichols.

RESOLUTIONS.

That the Government be asked to establish in the Province a station to demonstrate the possibilities of beef-raising.

That, in view of the fact that Nova Scotia is not receiving her proportion of aid in advertising her resources to possible settlers and immigrants, this Association place before the proper authorities their sense of this neglect or oversight, and ask that Nova Scotia be given her fair share of aid and prominence, and that this Association empower the delegates to the Fruit Conference and Live-stock Conventions to urge this appeal.

That the Public Utilities Commission be asked to give a larger free exchange, and lengthen the time of trunk calls from three to five minutes.

That the Federal Government be asked to encourage the establishment of a system throughout the Dominion, to enable farmers to get money for purchase and improvement of farms, at a less rate of interest than is at present possible.

That a committee, of which F. L. Fuller is chairman, be appointed to draft a more stringent stallion law for the Province.

That the Government be asked to establish a quarantine station at Yarmouth for the convenience of breeders in Western Nova Scotia.

That we ask for increased grants to agricultural societies.

That we confirm the request made last year for a dormitory at the Agricultural College at Truro.

R. J. MESSENGER.

I consider "The Farmer's Advocate" the best farm paper in America to-day. Ontario is too small a word to use in describing its superiority over all other papers published in the interest of the farmer.

D. McCRIMMON.

Linds Co., Ont.

Ontario Plowmen's Association.

The annual convention of the Ontario Plowmen's Association was held in the City Hall, Toronto, on Friday, Feb. 2nd, at 11 a.m. Upwards of 150 delegates were in attendance, representing the different branches throughout the Province. The meeting was enthusiastic throughout, and President Rennie's address contained many important references to the important work of the Association. He referred to the assistance given by the Provincial and Dominion Governments over thirty years ago to agriculturists, and the large grants that were given over a quarter of a century ago to Provincial, county and township plowing matches. Wherever these matches were held you find to-day the finest cultivated farms in Canada. The revival of these subventions, so long delayed, will add materially to the productiveness of the soil of this country. Thousands of dollars were granted in those early days, and in 1911 the Ontario Government placed a small grant of \$250 in the estimates for plowing matches held in the whole Province. It was proposed that the Ontario Government be asked that the grant be increased to \$1,000 during the present session of Parliament, and that the Dominion Government be requested to give substantial assistance on the basis of the cultivated acreage in each Province, to the different Plowmen's Associations.

The treasurer's report was submitted by T. A. Patterson, which showed the Association to be in a prosperous condition financially.

The constitution was amended, and the basis for grants in future will be two-thirds of membership, and one-third on actual cash expended for prizes. The Branch Associations to make returns to the Central Association within five days of the holding of the match, accompanied by a sworn statement as to membership and cash prizes paid.

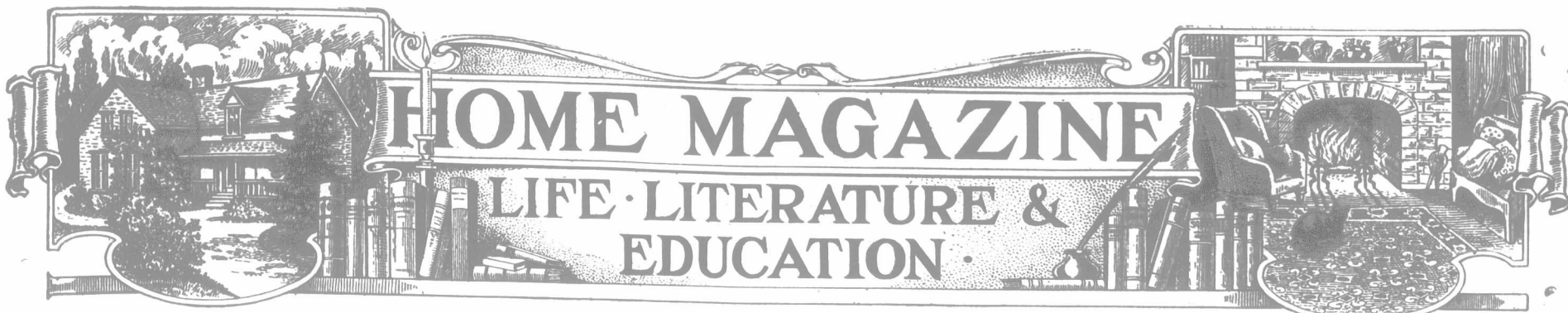
The following is the list of officers and directors for 1912: Hon. Presidents, Alex. McGowan and H. H. Pugsley; President, Simpson Rennie; 1st Vice-President, Wm. Walkington, King; 2nd Vice-President, Frank Weir, Agincourt; Treasurer, T. A. Patterson, Ellesmere; Secretary, J. Lockie Wilson, Toronto. Directors—A. P. Pollard, Canton; Wm. Walkington, King; A. Warnica, Craigvale; Jas. Hood, Agincourt; W. A. Dickieson, Rockwood; Walter Patterson, Stroud; Jas. McIean, Richmond Hill; Jas. Sree's, Britannia; Frank Weir, Agincourt; T. J. Chisholm, Hornby; Arch. Patterson, Ellesmere; N. W. Malloy, Toston; Simpson Rennie, and J. Lockie Wilson, Toronto.

A Crop Contest for Boys.

A former Nova Scotian, now living in New York, seeking to lend his aid to the improvement of agriculture in his native Province, has made arrangements with the Department of Agriculture at Truro for two contests in the growing of turnips, one in Colchester County, and the other in Cumberland County. Any boy between 14 and 20 years may enter, provided the assessed value of his guardian's property does not exceed a certain amount (probably \$3,000). Prizes will be given for the best crop of turnips that can be grown on one acre of land, and the prizes are substantial ones: First, \$100; second, \$50; third, \$25. The donor has wisely provided that the prize-money must be spent in some definite way, to be agreed upon by the committee placed in charge of the contest, who are to be Charles Hill, Central Onslow; F. L. Fuller, Truro; M. Cumming, Truro. When the judges, who will be appointed by the Local Department of Agriculture, announce their decision, the committee will confer with the prizewinners and arrange that the money be spent in one or other of the following lines: First, in pursuit of agricultural education; second, in the purchase of improved stock; third, in underdrainage. Other options will be added. The valuable crops grown will repay competitors who do not happen to win a prize. Particulars of this contest will be available shortly, but in the meantime, anyone who is interested should write M. L. Fuller, Agricultural College, Truro, N. S.

The annual convention of the "Ontario Clay Workers" was held in Tilbury concurrently with the Corn Show there, Feb. 1st and 2nd, 1912. O. P. King, Stevenson, who has had much experience in the United States in buying, draining and re-selling land, said that 3-inch tiles were no good; 4-inch were the smallest that should be used. As a matter of news, one member reported an order for 1,000,000 tiles, which had been received by one firm from one of the American land companies which are operating in Essex and Kent Counties.

Programme is announced for the third Dominion conference of Fruit-growers, to be held in St. Patrick's Hall, Ottawa, Feb. 14th, 15th and 16th, commencing on the afternoon of Wednesday, 14th. The talent, although wholly Canadian, is of the first order, and the discussions should be "fruitful."



Little Trips Among the Eminent.

J. M. W. Turner.

[With acknowledgments to Encyclopaedia Britannica, and Biographies by Sarah Tytler, and Lorinda Munson Bryant.]

Chiefly owing, perhaps, to Ruskin's glowing eulogy of his work in "Modern Painters," the name of Joseph Mallord William Turner is the best-known in English art.

This "greatest painter of water-colors in the world's history," was born April 23rd, 1775, in Maiden Lane, Covent Garden, London, where his father kept a small hair-dresser's shop. His mother, from all accounts, was a woman of violent temper, and while her son was still but a very small boy she became insane. As a consequence the lad received but little home training, and, indeed, but little schooling. At a very early age, however, he exhibited marked talent in drawing, and, later in life, he made up for his early lack of academic teaching by extensive reading, particularly in the classics.

His earliest known notable drawing, one of Margate Church, was done in his ninth year, and during the succeeding years of his childhood, many a sketch from his pencil, chiefly of the quaint buildings of older London or shipping along the Thames, used to appear in the grimy little window of his father's shop. At times, too, it is told, he used to make drawings for a certain Dr. Munro, "for half a crown and his supper."

At fourteen he became a student at the Royal Academy, and while there made some money to help pay expenses by making colored prints for engravers, washing in backgrounds for architects, and giving private lessons in drawing. At this period, too, he began his habit of making long sketching tours, usually alone, and carrying his baggage at the end of a stick, with some abbey church or cathedral as the objective point of his journey, although, along the way, he worked incessantly, making rapid sketches of almost anything that came in his way,—boats, animals, plants, bits of light and shade, clouds—indeed his water-color studies of sky alone, yet extant, may be reckoned by thousands. He was at all times an inveterate worker, was always up and hard at easel or sketch-book at sunrise, and on occasion could walk twenty-five miles with ease. He studied the works of other artists, too, assiduously, practiced their methods until he had them within his grasp, then launched off into paths that he blazed for himself, as every man or woman of originality must do.

At twenty-two he exhibited his first picture in oils, a "View of the Thames at Millbank by Moonlight," and two years later, when he was already beginning to forsake the methods of the Dutch school, of Claude, and of Wilson, his earlier models, for his own more dazzling conceptions of sunlight and sunlit mist, he was elected an Associate of the Royal Academy. He became a member in 1800.

In 1798 he began to add poetic quotations to the titles of his pictures, quoting often from Thompson's "Seasons," and from a mysterious poem, written, presumably by himself.

During 1801-2 he made sketching tours in France and Switzerland, and when he was thirty-two he was appointed Professor of Perspective in the Academy, a position which he filled for thirty years. For almost half a century, indeed, he took an active share in the affairs of that institution, and interesting are the descriptions of him handed down from

his co-workers at that time,—of his speeches, "confused, tedious, obscure, and extremely difficult to follow," although his friend Chantrey has declared that he had "great thoughts if he could only express them"; of the lessons which he taught in which this slowness of speech was more than compensated by the exquisite drawings which he invariably made to illustrate what he had to say; of his appearance, "a little Jewish-nosed man in an ill-cut brown tail-coat, striped waist-coat, and enormous frilled shirt, with feet and hands notably small," those small hands usually "dirty," but the effect of his rather slovenly appearance relieved by bright blue eyes that saw, more, perhaps, than any other eyes of his time.

Turner had been "a weird, strange child, silent and thoughtful." As a man he was not less reticent, and, except during the hours spent at the Academy, fell more and more into the habit of shunning his fellow-men. Early in life he had been disappointed in love, and when he built his house, "Sandycomb Lodge," at Twickenham, the only other occupant of it, for the most part, was his father, the proud old father who stretched his canvases and varnished his finished pictures, and cooked the frugal meals for the two of them. After fifteen years he sold his house, giving as his excuse the fact that "Dad" was always working in the garden and taking cold." The real reason, however, was probably that too many of his friends had discovered his retreat.

He now moved to Queen Anne street, to a gloomy old house with a large work-room and plenty of space for the pictures which he piled up there, calling them his "children," and often, from sheer force of his love for them, refusing to sell them.

beautiful, and were absolutely true to nature's mood as he saw it; and more and more he ventured into those daring experiments in color, which many have held too brilliant, but which Ruskin steadfastly maintained were but according to nature's self, had we but eyes to see her as she is.

There is no question but that the artist sees more color in nature than the ordinary man, and there is no question also, but that Turner was one of her cleverest observers. Perhaps we may quote, just here, an interesting paragraph, written by Redding, who accompanied him sometimes on his journeys, which illustrates this point as well as Turner's extreme simplicity of living.

The two had spent the night together at a small roadside inn. "Turner was content," says Redding, "with bread, and cheese, and beer, tolerably good, for dinner and supper in one. In the little sanded room we conversed by the light of an attenuated candle and some aid from the moon until nearly midnight, when Turner laid his head upon the table, and was soon fast asleep. Three or four hours' rest was thus obtained, and we went out as soon as the sun was up to explore the surrounding neighborhood. It was in that early morning that Turner made a sketch for the picture, "Crossing the Brook." In another excursion to Borough Island the morning was squally, and the sea rolled boisterously into the Sound. Off Stakes Point it became stormy; our Dutch boat rode bravely over the furrows. Two of the party were ill. Turner was all the while watching the troubled scene. Bolt Head to seaward, against which the waves broke with fury, seemed to absorb his entire notice, and he scarcely spoke a syllable. While the fish were getting ready, Turner mounted nearly to the

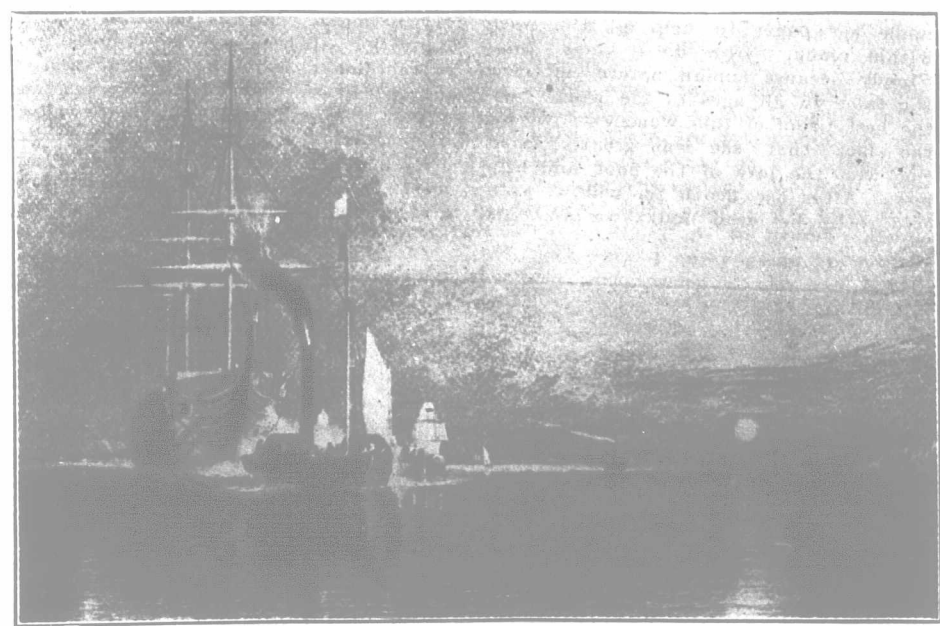
fired the then youthful Ruskin with admiration for his work.

Turner was, indeed, rapidly amassing a large fortune through his art, yet, though he has been accused of avarice, it has been conclusively proved by those who have taken the trouble to investigate, that he really never considered money in connection with his work. Indeed, many reflections cast on Turner's character have been traced to the jealous criticism of one biographer, who has been extensively copied by others. It has been said that he was of repulsive personality; Ruskin states that he found him interesting. It has been stated that he was cynical; his pupil, Redgrave, tells a very different story. It has been represented that he was sordid, exacting, selfish, unkind; those who knew him best have told many a tale of his unostentatious kindness. . . . Upon one occasion, for instance, a poor drawing-master's widow tried to repay him a loan. "Keep it," said he, "and send your children to school and to church." At another time, while working, he was interrupted by another poor woman. He roughly dismissed her, then immediately ran after her and slipped a £5 note into her hand. Once at least, he took down one of his own pictures from the Academy wall in order to make room for one by an unknown artist; and on no occasion would he ever permit his tenants who chanced to fall into arrears, to be prosecuted.—These are but a few of the instances told of Turner's generosity. The truth seems to be that a somewhat gruff manner blinded casual acquaintances to his real character, that he was merely a naturally shy and reticent man, who met with the misunderstanding and hasty judgment that usually attends shyness and reticence.

After his last visit to Italy, in 1840, it is held by some that his work deteriorated. In 1845 his sight began to fail, and henceforth his work was much criticised. He felt these attacks keenly, but continued to exhibit until 1850. In the following year, 19th December, he died at a little cottage at Chelsea, where he had been living for some months, and was known as "Admiral" Booth—died "with his face turned towards the window through which might be seen the sunshine mantling the river and lighting the sails of the boats drifting up and down." His body was taken thence to Queen Anne street, and then to its final rest in St. Paul's Cathedral.

"During the ten years I knew him," says Ruskin, "years in which he was suffering most from the evil-speaking of the world, I never heard him say one depreciating word of any living man or man's work; I never saw him look an unkind or blameful look; I never knew him let pass, without sorrowful remonstrance or endeavor at mitigation, a blameful word spoken by another. Of no man but Turner, whom I have ever known, could I say this."

After the reading of his will, the gallery in Queen Anne street was visited, and found in a most deplorable condition. "The gallery," says Redgrave, "seemed as if broom or dusting-brush had never troubled it. The carpet or matting (its texture was indistinguishable from dirt) was worn and musty; the hangings, which had once been a gay amber color, showed a dingy yellow where the color was not washed out by the drippings from the ceiling; for the cone and the glass skylights were in a most dilapidated state, many panes broken and patched with old newspapers. From these places the wet had run down the walls and loosened the plaster, so that it had actually fallen behind the canvas of one picture, "The Bay of Baia," which, hanging over the bottom



The Old Temeraire.

Tugged to her last berth to be destroyed. (From painting by Turner.)

After his father's death, in 1830, Turner was never the same again. Thenceforth he lived a life of almost complete isolation, and although he still retained the house in Queen Anne street, it was chiefly as a repository for his pictures. More and more he fell into the habit of making long painting trips, often spending weeks in some obscure boarding-house, for even his best friends did not know where to find him. More and more, too, he gave himself up to painting his "dreams," idealizing everything that he touched, and not caring the least whether his pictures were like the places portrayed or not, provided they answered to his sense of the

highest point of the island rock, and seemed writing rather than drawing. The wind was almost too violent for either purpose."

The picture, "Crossing the Brook," above referred to, was exhibited at the Academy in 1815, and Turner refused £1,600 for it.

The period from 1829-39, was, perhaps, the most prolific in Turner's life. During that time he sent no fewer than fifty-five canvases to the Royal Academy, besides painting many others for private commissions, making thousands of sketches, and illustrating several books, among them Roger's Italy (1830), the illustrations of which first

of the frame, bagged outwards, with the mass of accumulated mortar and rubbish it upheld. Many of the pictures, "Crossing the Brook" among others, had large pieces clipped or scaled off; while others were so fast going to decay that the gold first and then the ground had perished from the very frames, and the bare fir-wood beneath was exposed."

By his will, Turner left his pictures to the National Gallery, with the stipulation that "Dido Building Carthage" be placed between two celebrated Claudes,—as though he would call upon all the world to judge between his work and that of the artist whom, in his day, England, with the exception of Ruskin, preferred before him. The bulk of his money, amounting to £140,000, he left to provide a fund for the support of poor artists. The will, however, was disputed; £20,000 went to the Royal Academy, and the rest, minus the cost of the legal proceedings, to the next of kin.

Among Turner's most famous pictures, in addition to those already mentioned, were "Sun Rising Through a Mist," "The Decline of Carthage"—painted as a warning to England to guard against agricultural decline and the effeminacy that comes of too much luxury; "Ulysses"; "The Golden Bough"; "The Slave Ship"; "The Fighting Temeraire Tugged to Her Last Berth to be Broken Up."

The last named, exhibited in 1837, is usually considered his masterpiece. "It is simply impossible," says Lorinda Munson Bryant, "to have any idea of the glory of the painting from a half-tone reproduction. The peculiar phantom-like appearance of the old Amazon is as though it were a vision of what she was at Trafalgar, when she led the van and won the great victory for Nelson. We feel indignant at the sputtering little steam-tug that is dragging her off to annihilation. The deep red rays of the setting sun cast a lurid light of disapproval, while the yellow light gives a golden glow to her last moments. . . . Turner painted this picture following the suggestion of an artist friend while they were out on the Thames when the old Temeraire was being towed off."

The same critic observes: "When one first enters the Turner room in the National Gallery, London, the sense of intense light is so overpowering that it takes some time to adjust oneself to the high key. After becoming thoroughly saturated with those marvellous canvases, upon going from the room the effect is as though leaving the bright sunlight."

If the effect after all these years, after the lack of care with which Turner treated his pictures, and after the decadence due to a faulty method of preparing his mediums—for even Ruskin was compelled to acknowledge that his pictures were seen at their best only for one month after their completion—is such, what must have

been the impression of their first splendor? Yet Ruskin has defended his coloring, insisting that his wildest innovations are warranted by nature. "He went to the cataract for its iris," says he in one of the "purple" passages for which he has always been so justly famous, "to the conflagration for its flame, asked of the sea its intensest azure, of the sky its clearest gold."

Turner was not only an artist, unique in the history of painting. Notwithstanding the criticisms launched against him, he profoundly influenced British art. Needless to say, his paintings—at least those of his best period—are now worth fabulous sums.

showing the coats and garments which Dorcas made, while she was with them."

With our column to-day appears a poem which has been often repeated, and is probably well known to many of you. I make no apology for that. Life is made up of old things and things often repeated. We don't refuse to eat our dinner or say our prayers, because we did the very same thing yesterday. Our bodies are built up by food, fresh air, rest and exercise. But none of these things are of much use if only taken at long intervals. And our souls grow like our bodies, day after day accumulating strength and nourishment from ordinary surroundings. And a life

will not have personal love for you so that your death will mean the death of a friend. There is a wonderful opportunity for beauty in a life of everyday work—work for the comfort and good of others. The life may seem to be flitting away in "a round of trifles," but if it is a consecrated life, laid at the feet of Christ for Him to use, then through the "trifles" He can work out His own great purposes. Dorcas only did woman's work—sewing—but her sewing was so glorified by love that it has helped the world for nearly two thousand years. And, if the world had never heard of her, her loving work would have been just as beautiful, just as dear to God.

We are apt to miss the glory of the commonplace, in our ambition to do great things with our lives. When the Bethlehem shepherds were directed to their long-expected Messiah, the Great Believer of their people, they were given a "sign" in order that they might recognize Him. This sign was startling because it was so commonplace. They were to look for a helpless child in a stable, in probably the poorest building in the neighborhood—or only a rough cave. Where the unspiritual only saw a little ordinary child, those whose eyes were open to the Vision of God saw His greatest gift to the world, the child whose Name is called "Wonderful, Counsellor, The Mighty God, The Everlasting Father, The Prince of Peace."

So it is always. Where one person can only discover bread and wine, another reaches through the outward appearance and finds God. One woman does her work in a commonplace fashion, while another is filled with the joy of serving the King; while her hands are busy with her ordinary work she is feeling as highly honored among women as if she were the mother of JESUS and ministering to Him. Has He not said of all those who do the will of God that they are in deep reality His brother, sister or mother?

A life "full of good works" means a lot of drudgery—to outward appearance. It means that you must over and over again do the things you don't like to do, and let other people secure the best places, while you are pushed aside. The One who always "went about doing good" was repaid by ingratitude and injustice. Have you any right to complain if you are called to follow in His steps? The important thing for each of us is not whether we are growing richer or more admired, it is not whether we have succeeded in finding the life-work which is most congenial to our tastes, but it is whether we are filling our days with good works. That does not mean, necessarily, that we are sewing at garments for the poor—though, if we neglect the poor God calls us to serve, we are really refusing to minister to Him. But each of us is called to do some special work each day; and I think God loves to keep us by His side, like dear children, so that we can ask Him exactly what He wants us to do and how He wants it done. No one can really point out to another the particular good works which he is sent into the world to do. There is only one way of finding out with certainty, and that is to keep very close to God. There is only one mediator having the right to come between God and man, and that is the One who is God and is Man.

Good works, if they are to be the glorious (if work) of a child of the King, must be the natural outcome of secret communion with the Father. They must spring from the life hidden from every eye but God's, as hidden as the life in a plant which invisible itself—reveals itself visibly in every fresh leaf, fragrant and beautiful flower, and delicious fruit. Canon Eddon says of religion that, though it has its outward and visible side, its recognized obligations, yet "its real strength and empire is within; it is in regions where spiritual activity neither waits the eye nor commits itself to language. All to whom our Saviour—a real Being—know that their souls have had and have relations with Him which belong to the most sacred moments of life. If we may employ a metaphor which Holy Scripture suggests, they hesitate to discuss those relations almost as naturally as a bride would shrink from taking the world into her confidence. The case of each soul is altogether peculiar to itself."



Venice. (From painting by Turner.)

Hope's Quiet Hour.

Full of Good Works.

This woman was full of good works and almsdeeds which she did.—Acts ix. : 36.

There are thousands of "Dorcas" societies in the world, taking their name from a woman who once lived at Joppa. She never dreamed of starting sewing societies, never thought that her name would be remembered with honour to the end of time. She "was full of good works and almsdeeds which she did," and her good works were not done to win admiration for herself, but were the natural expression of the love which made her eager to help all the needy within reach. How do I know this? Simply because human nature is much the same in all ages of the world, and the best proof of this woman's love was the fact that she was greatly loved. She won the love of the poor and helpless. After her death the widows gathered round her dead body "weeping, and

is slowly rounded into beauty by the constant repetition of everyday acts of goodness. I read in the paper a short time ago the account of a child's heroic rescue of another child from drowning, at the risk of losing her own life. That was a splendid thing to do, but it is impossible to make a beautiful life out of an occasional act of heroism. You might as well try to make a strong healthy man out of a baby by giving him a magnificent meal occasionally. You might as well try to make a beautiful garden by having in it only great and glorious trees. If there are no sweet and lovely flowers, no common green grass under foot, it will be a very bare and uninviting garden. And if you try to make your life beautiful by concentrating all your efforts on great and extraordinary feats of heroism, neglecting the little commonplace graces and duties, you will never have the widows weeping over your death as Dorcas did. They may display the coats and garments you have made, they may put up a showy monument to your memory, but



Dido Building Carthage.

(From painting by Turner.)

You know that you are longing to live out this earthly life on the highest possible level—then be very sure that the people around you, who seem to you very commonplace and uninteresting, are trying to climb higher, too. It is as natural for men and women to aspire as for plants to reach up to the light. Therefore, I am very sure you will join me in this prayer:

"While our days on earth are lengthened,
May we give them, Lord, to Thee,
Cheered, by hope, and daily strengthened,
May we run, nor weary be,
Till Thy glory
Without clouds in heaven we see."

When death calls us into the open Presence of the Master, who is always beside us in our work, may we win that reward which is worth working for—His word of approval: "Well done, thou good and faithful servant; thou hast been faithful over a few things."

DORA FARNCOMB.

For Love's Sake.

Sometimes I am tempted to murmur
That life is flitting away,
With only a round of trifles
Filling each busy day;
Dusting nooks and corners,
Making the house look fair,
And patiently taking on me
The burden of woman's care.

Comforting childish sorrows,
And charming the childish heart
With the simple song and story
Told with a mother's art;
Setting the dear home table
And clearing the meal away,
And going on little errands
In the twilight of the day.

One day is like another!
Sewing and piecing well
Little jackets and trousers,
So neatly that none can tell
Where are the seams and joinings.
Ah! the seamy side of life
Is kept out of sight by the magic
Of many a mother and wife!

And oft when ready to murmur
That life is flitting away,
With the self-same round of duties
Filling each busy day,
It comes to my spirit sweetly
With the grace of a thought divine:
"You are living, toiling, for love's sake,
And the loving should never repine."

"You are guiding the little footsteps
In the way they ought to walk;
You are dropping a word for Jesus
In the midst of your household talk;
Living your life for love's sake,
Till the homely cares grow sweet,
And sacred the self-denial
That is laid at the Master's feet."
—Margaret E. Sangster.

From Unrecognised Heroes.

By Joaquin Miller.

And what for the man who went forth
for the right,
Was hit in the battle and shorn of a
limb?
Why honor for him who falls in the fight,
Falls wounded of limb and crippled for
life?
Give honor, give glory, give pensions for
him,
Give bread and give shelter for babes
and for wife.
But what of the hero who battles alone,
In battles of thought where God set
him down,
Who fought all alone and who fell over-
thrown?
I tell you 'twere better to cherish that
soul—
That soldier who battles with thought
for a sword,
That climbs the steep ramparts where
wrong has control,
And has beaten back by the rude
rampaging horde.
Ah, better to cherish his words and his
death,
Than of the Napoleons that people the
earth.

The Beaver Circle.

Our Senior Beavers.

[For all pupils from Senior Third to Continuation Classes, inclusive.]

Dear Beavers,—Just "post office" to-day. I am sorry that so many of you have to wait so long before seeing your letters in print, but, you see, there are so very many that it cannot be helped. The first six that follow were sent to us by a teacher of a school near Drumbo, Ont., and were written by pupils in her Third Class.

The Springhill School Letters.

Dear Puck,—This is the first time I have written to the Beaver Circle. I have about three-quarters of a mile to go to school. The name of my school is Springhill. I have only one sister, and three brothers. Their names are Jean, Robbie, John, Clinton; my own name is Stella. We live on a farm of seventy-five acres. We keep a lot of

for we all bring our sleighs and draw each other to the end of the yard and back again. We have a pond, but there isn't any water in it, so we can't skate on it. At home I have a big pond and I skate on it. The school I go to is Springhill. We have lots of fun, and I have a dog. He is all right, for he goes with me for the cows. I have a collar for him, and I have a little rope on it, and I send him after the cows. I have to run to keep up to him. He is a very good dog.

CECIL MEACHAM
(Age 12, Sr. III. Book).

Dear Puck,—I have about a mile and a half to go to school. The name of my school is Springhill. I have three pets at home, a dog, cat, and a horse. I have the most fun with my dog, for he is only a pup. We have horses, cattle, pigs, sheep and poultry. I live on a farm near Drumbo, Ont. My teacher's name is Miss McArthur. She lives just up a little way from my place. One day at school we drew our teacher around a ring on a hand-sleigh. We tried to tip her off, but could not. We have snow about six inches deep. We play such games as fox and the goose,

had some pretty flowers. The woods that we pick our flowers in, in the summer, is just at the back of the school. We have fun singing at school.

CLARA KNIGHT (age 12 years).

Dear Puck,—I am going to school now, and it is called Springhill school. We have quite a sized school ground to play in, and besides this we made a garden. We planted carrots, sunflowers, mignonette, spruce trees, and a lot of other things. We go sleigh-riding down hill. We have examinations in our school. Last time we had geography, I got 89 marks out of a hundred.

STEWART WILLIAMSON
(Age 15, Sr. III.).

Dear Puck,—I live in Blenheim on a farm near Drumbo. I go to school every day, and am in the Senior III. Class. Our school is situated beside a wood. There are about ten scholars at our school. As there is snow, we had visitors of quite a flock of snow-birds. They stayed for dinner, then went away. We brought our cattle home on the 12th of November, and were all afternoon getting them tied. The feed is short in the neighborhood, owing to the fact that we were in the dry belt.

I have for pets two cats and two dogs. The old dog is about fourteen years old, and once he was the best cattle dog around. My other one is a pup. Well, I think I will finish.

R. L. EASTON (age 10 years).

LETTER FROM P. E. I.

Dear Puck and Beavers,—Effie Groh's letter especially interested me. So you have read "Anne of Green Gables," Effie? So have I. I have read Miss Montgomery's other books, "Anne of Avonlea," which is a sequel to "Anne of Green Gables," "Kilmeny of the Orchard," and "The Story Girl." They are all very good books, but I think "Anne of Green Gables" is the best.

Perhaps you will be surprised when I tell you that I am acquainted with the author of these books. She lived only three miles from here until last July, when she was married. She now lives in Ontario. I have often walked up Lover's Lane and seen the Lake of Shining Waters and all the other places that she mentions in her book.

I go to school nearly every day, and am taking up some of the advanced branches, namely: Latin, French and algebra. We have a mile to walk to school, but mostly get a drive in winter. We have great fun at school when there is good skating. Right below the school-house there is a large mill-pond. I have a pair of skates, and can skate, too. I am almost the same age as Effie Groh, only my birthday is the 7th of January.

Now, I am afraid if I write any more that Puck will put this in the w.-p. b. Why don't more boys and girls from the Island write to this Circle?

Now, I must close, wishing the Circle success. Perhaps I will come again, if Puck will let me.

ENID SIMPSON
(Age 13, Sr. IV. Book).
Bay View P. O., P. E. Island.

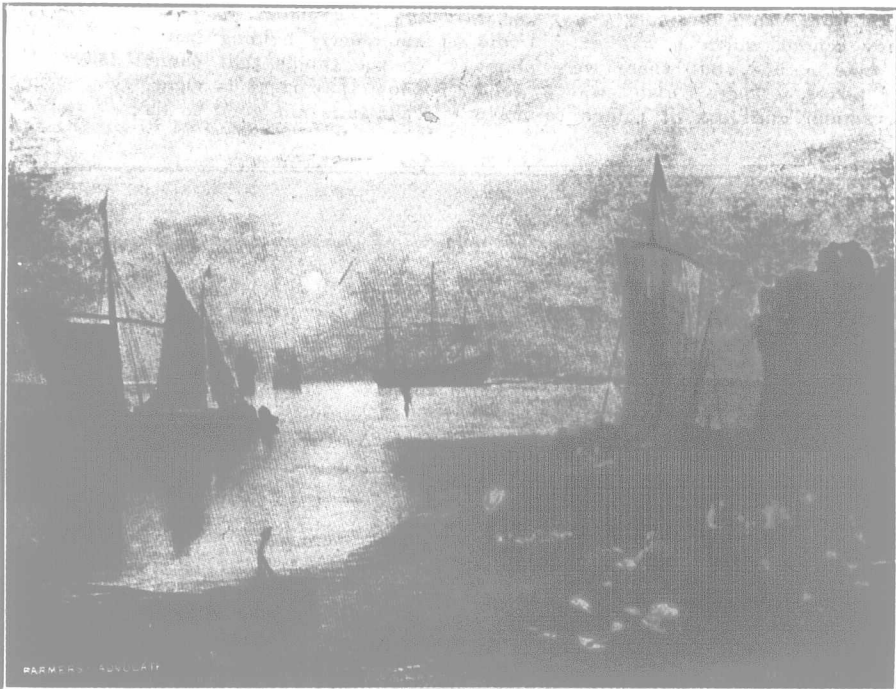
LETTER FROM QUEBEC.

(Written in Christmas Holidays.)

Dear Beavers,—May I enter your Circle, also, Puck? We are having Christmas holidays. I like them, don't you? I had lots of holidays this year, but they were not nice ones, for I had the measles in the spring and whooping-cough this fall. I have only been going to school for two months this term, and I came second in my exams. We have a mile and a quarter to go to school. I like walking to school in nice, mild mornings in winter.

I was out on the hill for a sleigh-ride to-day. The crust was dandy. I have no good sleigh, so I took my toboggan. It turned around once or twice when I was going pretty quickly. I got a merry send then.

Santa Claus was very good to me. I hung up my stocking—and guess—I got some potatoes, onions, knife, and a big fork and spoon, a bottle of oil, and some shavings. It wasn't Santa Claus that



Sun Rising in a Mist.
(From painting by Turner.)

poultry and four horses; their names are Topsy, Queen, Punch, and Maud. We have twenty-one head of cattle and thirty-one pigs. We have two sheep. We have a dog; his name is Collie, and two cats; their names are Fido and Daisy. There was such a hard frost the other night that it froze our flowers that we had at school. Last year at school we tried gardening, but it was so dry that nothing much came on. The third Class had China pinks and carrots. The Second class had mignonette and vegetable oysters. The First Class had sun-flowers. The teacher got a collection of butterflies and showed them at Drumbo Fair, and got second prize on them. The teacher's name is Miss McArthur. Today at noon we gave her a sleigh-ride, and going around the corner she was afraid that she was going to fall off.

STELLA TELFER (age 12 years).
Drumbo, Ont.

Dear Puck,—This is my first letter to the Beaver Circle. I go to school every day at Springhill, and live two miles away. There are woods near the school, and we play in them. In the winter we play on the ice. I play with the dog at home. Our home is near the village of Princeton. We have seven horses, twenty head of cattle, and twelve pigs. We have two little colts named Nellie and Daisy. Daisy will hold up her front feet and kiss. I guess I will close now.

VERN MAYCOCK
(Age 12, Book Sr. III.).

Dear Puck,—I live in the Township of Blenheim, on the Fourth concession. We have a teacher here, and we like her pretty well. We have a good time here,



Holly and Eva Mooney.
Onslow Corners, Quebec.

did it, but two of the girls filled it up, and when they went to bed, mamma and my sister filled theirs up for them of something the same as mine.
Is this letter too long? I hope it is not. Wishing the Beavers much success.
CORA PRITCHARD
(Age 12, Continuation Class).
Wakefield, Que.

AN ONTARIO LETTER.

Dear Puck and Beavers,—I have just finished reading the letters to the Beaver Circle, which I enjoy very much. I have been a silent reader for a long time, not having the courage to write. Well, Puck, I have been wondering, like some of the other Beavers, what you look like. I did not imagine you were like Edie Groh said, though. I guess I will tell you about a cyclone we had here one time. I went to school on the day it happened. The sky was dark, and I thought we must be going to have a storm. At first recess when we came out the sky was still darker, and the thunder was making a continual rolling in the west. In about half an hour it began to rain and the wind came up. It rained so hard that the gravel which was around the schoolhouse flew up and hit the window-panes. The teacher pulled down the window-blinds and we all went up to the front of the schoolhouse. We did not think the storm was so bad till we looked out after it had ceased and saw the tops were blown off several of the pine trees, and for miles around the trees in woods and orchards were blown down; also roofs were torn off nine barns within sight of our place. Fortunately, none of our buildings were harmed. People said there had not been such a storm around here for twenty years before. Well, I will close, as my letter is getting too long. Hoping my letter will jump the w.p. b., I will close.
HERBERT C. CAMPBELL
(Age 11, Sr. III. Class).
Ridgetown, Ont., Box 124.

Our Junior Beavers.

[For all pupils from First Book to Junior Third, inclusive.]

ANOTHER SPRINGHILL SCHOOL LETTER.

Dear Puck,—This is the first time I have ever written to the Beaver Circle, and I hope my letter will suit. I go to school every schoolday and have great fun. There are about ten going to our school. There are four in the First Class, and I am the only one in the Second, and six in the Third. There are no Fourth or Fifth Classes. I live the closest to the school. The school is north of my home. My pets are a kitten, a horse, and two calves. The kitten's name is Bob; the horse's name is Prince; the calves' names are Polly and Fuzy. I have a mother and father and sister, but I have no brother. I am afraid my letter will be too long, so I'll say good-bye.
ETHEL ELVIDGE (age 9, Class III.)

Dear Puck,—This is the second letter I have written to the Beaver Circle. I go to school every day, and I like it fine. I will tell you about the trip I had on Christmas. My father hitched on the wagon and put some straw in it, and we all went down to my uncle's for dinner. When we got there, my cousins and I went out on some ice and played; then we went in for dinner. We had a lovely big goose. After dinner we went out and played again, then we came in and played some games, then father got the horses and we went home.

Now, I will tell you what I got for Christmas. I got a lovely big doll, a Teddy Bear, pair of mitts, a dress, two handkerchiefs, a string of beads, a sweater, and ribbon. Wasn't Santa good to me? Hope he was as good to all the other little girls. Well, I will close with a few riddles.

As round as an apple, and as flat as a bit.
Ans.—A button.

It's black and white, and read (red) all over.
Ans.—A newspaper.

CHARLOTTE POTTER
(Age 9, Book III.)

Loyal, Ont.

Dear Puck and Beavers,—I thought I would write, as I would like to join your Beaver Circle, and hoping your great monster, the w.p. b., is full. My father has taken "The Farmer's Advocate" for some time, and likes it fine, and I enjoy reading the letters very much. I like to read books, and I read everything I can get to read. We have a good dog named Sport. In the summer time the cows were in the woods, and grandpa said that if Sport could let the bars down he could get the cows alone.

I will tell you about my little cousin. He is four years old. One day his mamma heard him say a naughty word, and she washed his mouth with soap. A few days after he saw her cleaning her teeth, and said, "Why, mamma, what bad word have you said?" Don't you think he was cute?

I have a mile to go to school. I go to S. S. No. 7, Dawn.
VERA GETTY (age 9, Book Jr. III.).
Oakdale, Ont.

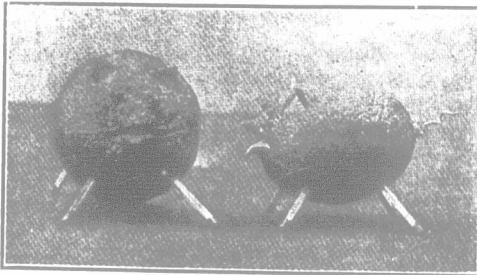
Dear Puck and Beavers,—I am very interested in the Beaver Circle, and for the second time am going to write a letter to you.

On Christmas Eve I got a lot of nice things from Santa Claus, and also had a good time on Christmas.

I am going to tell about a box social at my school which I was at. I did not take a box, but there were about sixty boxes. There also was a good programme, and lots of things to make

To Make Lemon Pigs.

Pick out a nice plump lemon with a piggy-looking snout at one end. Cut a slit in the snout for piggy's mouth. Next, stick two little black-headed pins in to make eyes, and cut little V-shaped

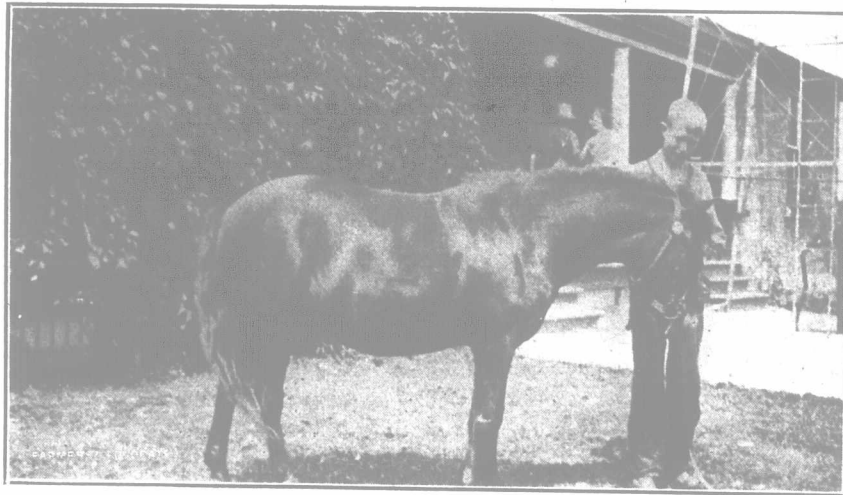


Lemon Pigs.

"ears" above them with scissors. Now make legs with burnt matches or tooth-picks, and put on a tail of ravelled yarn, and see what a nice pig you will have.

Consolation.

In the little bitter waves of woe,
Beaten and tossed about
By the sullen winds that blow
From the desolate shores of doubt,
Where the anchors that faith has cast
Are dragging in the gale,
I am quietly holding fast
To the things that cannot fail.
I know that right is right,
That it is not good to lie;



Clifford Henderson and His Pony.

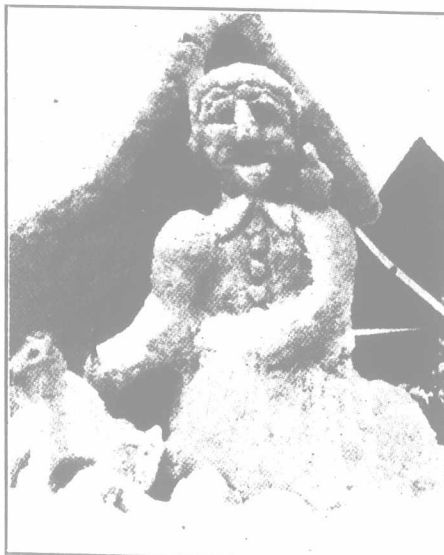
you laugh. They made over forty-three dollars. Well, as I have run out of news, I will say good-bye.

VERA VIOLA SPEER
(Age 10, Class III.).

Tara, Ont., Box 4.

A Snow Man.

Pile up snow with a shovel or by "rolling" snowballs and putting one on top of another. Now, with a big, dull knife, scrape away the snow to form



A Snow Man.

(From "Suburban Life".)

arms, features, etc., in some parts of Germany, the snowmen make very beautiful snow statues in the parks, and thousands of people enjoy them.

That love is better than spite

I know that neighbor than a spy;

I know that passion needs

The leash of a sober mind;

I know that generous deeds

Some sure reward shall find;

That the rulers must obey,

That the givers shall increase;

That duty lights the way

For the beautiful feet of peace;

In the darkest night of the year,

When the stars have all gone out,

That courage is better than fear,

That faith is better than doubt,

And fierce though the fiends may fight,

And long though the angels hide,

I know that truth and right

Have the universe on their side.

—Washington Gladden.

City Comradeship.

By Anna Louise Strong.

Face on face in the city, and when will

The faces end?

Face on face in the city, but never the

face of a friend;

Till my heart grows sick with longing

and dazed with the din of the street,

As I rush with the thronging thousands

in a loneliness complete.

Shall I not know my brothers? Their

toil is one with mine.

We offer the fruits of our labor on the

same great city's shrine.

They are weary and I am weary; they are

happy and sad with me;

And all of us laugh together when even-

ing sets us free.

Face on face in the city, and where shall

our fortunes fall?

Face on face in the city—my heart goes

out to you all.

So, we labor together, is not the bond

divine?

Is the strength of the city built of

your life and mine? Selected.

The Ingle Nook.

[Rules for correspondents in this and other Departments: (1) Kindly write on one side of paper only. (2) Always send name and address with communications. If pen-name is also given, the real name will not be published. (3) When enclosing a letter to be forwarded to anyone, place it in stamped envelope ready to be sent on. (4) Allow one month in this department for answers to questions to appear.]

Last night some of us in this city had the pleasure and profit of listening to an address given by a missionary from Shanghai, China. As he sat there, so quiet and modest looking, awaiting the time for him to begin speaking, one could not help watching him a bit curiously, as one always does these folk from far-away lands. What sights they have seen! What dangers they have dared! What pangs of homesickness they have suffered in going so far away, from home and friends, and even fellow-countrymen! It seems, indeed, that these people must possess a few grains of steel, a fire of fervor unknown to more ordinary stay-at-home mortals; so perhaps it is pardonable to be curious about them.

Owing to the very general interest centering in the great upheaval going on at present in the audience was unusually large, and assuredly no one was disappointed in the address. In quiet, clear, forceful language, the speaker outlined the present state of affairs in the great country of the East, so that no one could go away without feeling a closer acquaintance with and a greater interest in the fortunes of its great multitude of inhabitants.

Japan, he said, has progressed wonderfully; yet China during the past five years has made greater strides than did ever Japan in her ten most progressive years. In fact, the advancement that China is making to-day is nothing short of marvellous. Schools and colleges are springing up like mushrooms all over the land, and young Chinese everywhere are evincing an astounding desire to learn according to modern Western methods. Business is being re-organized, and great manufactories established; as, for instance, the great iron works in one of the interior cities of the country (Hang-Kow, I think he said, but am not positive), where 25,000 Chinamen are employed, the whole concern owned and managed by Chinese. In short, China's resources, and they are tremendous, are being developed.

Nor are modern comforts despised. In practically all of the larger cities electric cars run on the streets, electricity is used for lighting, and taxicabs may be seen whizzing about everywhere, just as in Western cities.

A few years ago there were only two daily papers published in Shanghai; to-day there are twelve; and two hundred in all China. One is edited by Chinese women and published for Chinese women; a few are bi-lingual, English and Chinese. These papers help on the thirst for education and for information on all the questions of the day.

And not the least significant sign of the times is that many of the men in positions of influence, who are pushing on all these reforms, are Christian men, even to Dr. Sun Yat Sen, proclaimed by the Republicans as their first President. Most of these men have become converted abroad, for there are many of them studying in foreign schools, five hundred in the universities of England and continental Europe, no less than one thousand in the United States colleges, and as many in the colleges of Japan. These 2,500 men are "picked" men, the cream of China, and their expenses are usually paid by the Government. That they are abundantly worthy of the trust imposed upon them may be inferred from two examples. A Chinese student at Columbia University, New York, is regarded as the most versatile student in the whole of that immense university. He is editor of the literary periodical published by the students, and in a recent inter-university debate with Cornell, was chosen as the leader of the New York competitors. That he won the debate gives evidence of his logic and his oratory. . . . At Yale one of the most brilliant students is a Chinaman, who, last year, won the gold medal for oratory presented by the institution. . . . Such men as these, when they go back to China, will have the

very highest offices given them, and the heaviest responsibilities placed upon their shoulders.

For in China it is the man of learning who is exalted. The general who wins a battle is looked upon as a comparative nobody,—a necessity, perhaps, but that is all. As a race the Chinese are practical and peace-loving. Never, perhaps, in the history of the world has so tremendous a political upheaval as that which has just taken place—the most tremendous event," the speaker declared, "of the last one thousand years"—been accomplished with so little bloodshed.

In consequence of such changes, he remarked, England must be careful how she treats China henceforth. She has not been considerate enough in the past, and the Chinese know it. Especially do they resent her having forced India-grown opium upon her, and continued to send it in even when she had begun her warfare against it. That warfare has, however, been as successful as unique. Now but a fraction of the former amount of opium is grown in China, and the fight has been persistent enough to stop the importation of large quantities of the foreign-grown.

China distrusts Britain, her present friendship with Russia, and her alliance with Japan. On the other hand, she trusts America. The United States Government has been diplomatic with her. She has admitted Chinese students to her universities; she returned the \$250,000 paid her as indemnity at the time of the Boxer rebellion, to be used for the education of Chinese; she has sympathized with Young China, naturally, in her efforts to establish a Republic.

China, once among the most advanced of the countries on earth, suddenly stopped still and slept for a few thousand years. To-day she is awake, very much awake. With her 400,334,000 people, what may she not accomplish? What has she not accomplished during the last five years? Henceforth, if she can manage to establish unity, she must figure as one of the great powers of the earth.

Is it not wonderful to think that such great world-changes are taking place in our time?

HARDANGER WORK.

Of late I have been working on a piece of Hardanger work, and a few remarks on what I have done may, perhaps, be helpful to some of you who have been ambitious to try a bit of this very effective fancywork. "Congress canvas" is the right material to use. It is coarser in weave than scrim, and so not so hard on the eyes while one is working. The thread used is D.M.C. Cotton Perle No. 3. For the heavy part of the design simply work over and over with the thread. For the open work clip out the little squares with small sharp scissors, counting the threads to keep the squares even, then pull out the short cut ends. Work along each side, over and over, then darn the little crosses, over two threads, then under two, and so on, leaving two loops looser in the center of each crosspiece, to form the little protuberances. Hardanger work is rather tedious, especially the thick work, as it is necessary to keep counting the stitches and following the thread to keep every part even. In order to prevent danger of not coming out even at the corners, it is wise to work the corners first, then proceed towards the center of the sides of the table cover, or whatever the piece may be. If the design does not come out even there it is easy to work a slight difference in it at that point, the same at each center, and so keep the pattern symmetrical. The corners thus will be sure to be right, and they are the parts that will not stand tinkering. Hardanger borders are very effective for table covers, dresser covers and curtains. The open-work may be repeated if one chooses.

DRESSER MATS.

M. E. C. asks directions for making dresser mats. May we be pardoned if we suggest that they are not used now? Instead, make a dresser-cover of white linen or scrim, and decorate by embroidering the ends, or by using insertion of crocheted or drawn-work, or torchon lace. We are glad you had success with the

table mat, M. E. C. Did you make the whole set?

CROCHETED CAP.

M. J. asks directions for making star pattern aviation cap. Did you not like the pattern that we published last fall, M. J.? I can find none for "star" pattern. Perhaps you would like the shell pattern recently described by "Grey-bird."

FORMALITY IN RURAL DISTRICTS—MARYLAND BISCUITS.

Dear Dame Durden,—Many of us agree with you as regards the ceremoniousness of visiting cards in the smaller places, copying the larger towns and cities. Not only is it disgusting in that line, but many others might be mentioned. Even in a country where the callers could be counted on the fingers and thumbs, we see the card tray,—just as the table set for one of sedentary habits is not the one for a farmer or one who has to use his muscles for all they are worth at his work. He needs variety of food, and lots of it, just as a horse needs more oats when at hard labor. It seems to me that a farmer's table is where the fat of the land should be. It is not becoming to a farm to be otherwise, although sometimes, to the shame of the farm, it is otherwise.

I close with recipe for Maryland or beaten biscuits: One quart of sifted flour, two tablespoons of lard or butter, a teaspoon of salt, and warm sweet milk

peel is very tender; then stir in 1 lb. sugar for every pint of juice and boil until the peel is clear in appearance. Remove from the fire, and when cool turn into jelly glasses, cover with melted paraffin and put on the lids.

Cranberry Jam:—Wash 2 quarts cranberries, and stew them in a kettle with 3 cups water (put on cold) until soft. Let cool and put through a colander. Discard the skins, and put the juice and pulp on the fire, adding 2½ cups granulated sugar. Let cook until sugar is well dissolved, then turn into jelly glasses.

Orange Marmalade:—Peel 4 dozen oranges, quarter and take out seeds and inner skins as much as possible. Soak the peeling over night in water to cover to which half a cup salt has been added, then in the morning drain and boil in clear water until quite tender. Drain again and fine, then add juice and pulp. Add an equal quantity by weight of sugar; let come slowly to a boil, and then boil half an hour, stirring carefully. The marmalade should now be clear and delicious and ready to put in jelly tumblers.

Orange Jam:—Slice 12 oranges thin, remove seeds, put to stand over night in 6 pints water. Add 6 lbs. sugar; boil till thick.

Note:—Remember that oranges and lemons, to make really good marmalade, should be sliced very thin. The rind is invariably left on, except when grated or boiled separately, when it is added to the pulp afterwards.

in serving each couple with papers on which are written different sayings, and they are to search the rooms for the articles you will have lying around as answers to these sayings, as "Great Commentators—Potatoes. Family Jars—Sealers.

Again, you might pass papers with names or sentences that will make a drawing. After this has been done exchange drawings and see if the names can be supplied. As, A sweet girl graduate, Hands across the sea, etc.

A few moments' employment could be found in the composing of a story, having each one write so many sentences, and folding the paper after each sentence, then have a good reader read the papers aloud and the result will be very amusing.

Clothes pins will employ quite a number. The trick is to see who can pass the pins, at least which side, without letting any drop, and the quickest. Arrange the company in two lines, the head one of each line having eight or one dozen clothes pins. They are passed right down the line, each one as he receives the pins turning them over and passing on. When the last one received them he touches them to floor and passes back again.

Then, again, you might try a game like this. Divide into two even sides, having one person out. He will ask you a question, which you must answer with a person's name before the one out counts ten, or you will have to take his place; or you might have them start with some geographical name, and the next one on the other side is to give a name commencing with the letter the other ended with, and allowing so many minutes for an answer.

Fortune telling I think is enjoyed by both old and young alike. Have some clever, witty person who knows everybody present, disguise himself and act as a fortune teller, who must have some forfeit given by those who come to him. To redeem this forfeit the fortune teller asks them to do numerous trifles, such as put yourself behind a picture. Ans.—Write "Yourself" on a piece of paper and place it behind a picture. "Say shoes without stockings?" Ans.—"Shoes." Until they can correctly answer some of these they do not regain their "forfeit."

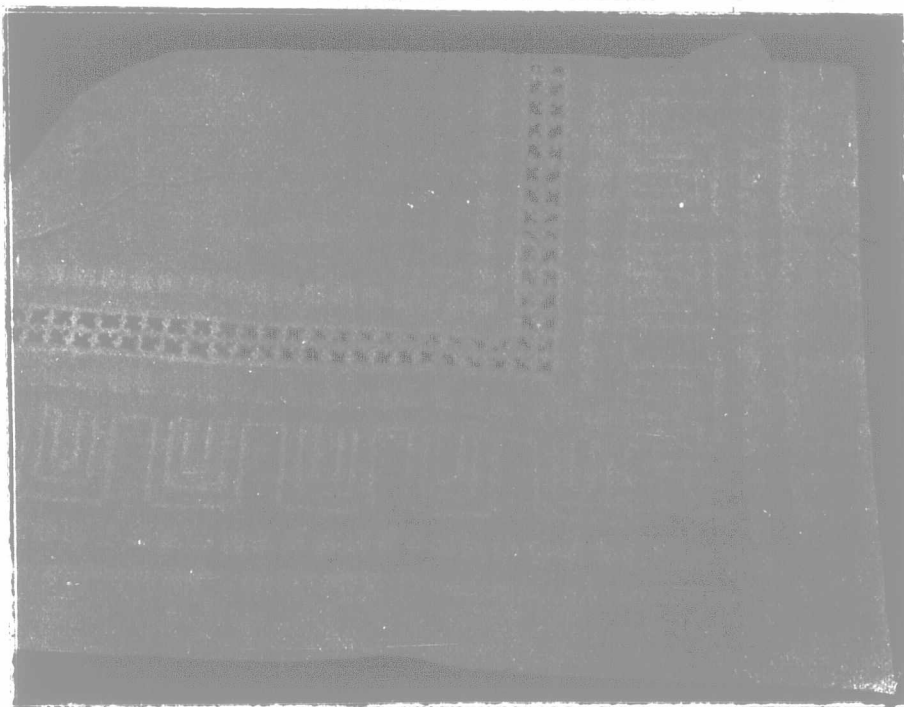
I hope these may prove of use to some, and expect to receive useful hints also. MARIE. Middlesex Co., Ont.

How Corot Became a Peasant.

His father was a little, dry, thin old man, whose correct appearance, precise gestures and short speech were in singular contrast to the geniality and jovial ways of Camille. He was the typical business man. He wished his son to go into business, and apprenticed him to a wholesale cloth merchant. Camille, who dreamed only of painting, conceived a violent aversion to commerce, and seized every opportunity to escape from the shop and go up to his room to copy drawings. His employer was very dissatisfied with him, and complained to his father, who reprimanded him severely. At last, one day the young man did not go to business, and told his father that he must follow his vocation, even if it brought him misery. Seeing that nothing could alter his decision, "Very well," the father answered, "I will give you 1,200 francs annually—not a centime more—and you will make the best you can of it."

Camille leaped for joy. He immediately made preparations for departure, left home, and installed himself in the little hamlet of Morvan, at a farrier's, whose numerous family were crowded into the only room, which was the forge. Corot there contracted the habits of the peasantry, which he retained ever after. He had no needs, lived only for his art, and found complete happiness in it.

For a long time Corot remained at the farrier's, satisfied with the coarse food, happy in his liberty, and feeling rich with his modest allowance. Endowed with robust health, and being jovial by nature, he always sang



Hardanger Work.

to make a smooth dough; one teaspoon baking powder sifted in the flour. Grind through a meat grinder or salad mill three or four times, working in flour each time until the dough is as smooth as glass and blisters when rolled out. Roll thicker than pie crust, and bake until brown in rather quick oven. If the grinder is not available beat with rolling pin or hatchet, doubling and redoubling until it blisters and cracks when broken. STICKATIT. Lambton Co., Ont.

A PAGE OF MARMALADES.

Lemon Marmalade:—Slice 12 large lemons and remove seeds. Pour on 6 or 7 quarts water and let stand over night. Boil all for two hours and let stand till next day, then weigh it, add an equal weight of sugar and boil gently until the whole is clear and beginning to jelly when cooled.

Orange and Lemon:—Take 1 dozen oranges and 6 lemons, wash, slice thin (leaving rind on, of course) and remove seeds. Pour on 1 gallon water and let stand 36 hours, then boil gently for two hours. Add 10 lbs. granulated sugar, and cook one hour longer.

Another:—Slice 1 dozen oranges add 2 lemons, and remove the seed. Measure the juice, and add enough water to make 3 quarts liquid. Put all in a granite kettle, cover, and set in a cool place over night. Next morning bring slowly to boiling point and simmer until the

HOW TO SPEND A PROFITABLE AND ENJOYABLE SOCIAL EVENING.

I think we are losing the old-time sociability in our social evenings. A game of cards till the wee small hours of the morning seems to be the social idea of this day.

Cards are all right, perhaps, for a short while, but why not mix it up with other amusements? Guessing contests are very interesting and very amusing; for instance, a heart to heart talk about ages.

Questions:—What age will people live to if they live long enough? Answer—Dotage.

2. What age do milliners delight in? Ans.—Plumage.

3. What age do people get stuck on? Ans.—Mucilage.

Twenty or twenty-one questions of this sort make a very interesting hour's work.

Another set could be made of fruits, of soups, of parts of the body, as, What Joshua and Caleb were in the land of Canaan? Ans.—Spies. What would you represent in a cart drawn by a donkey? Ans.—Pear.

What does a large silk handkerchief minus d represent? Banana.

And there are many others too numerous to mention.

Then there are always among the crowd some who can either play, sing or recite, and this is always a great addition to an evening's entertainment; most suitable at the close either just before or just after lunch has been served. Another very interesting amusement is

A Fortune in Chicks



One Man and His Son Made \$12,000 In One Year With Poultry

You will want to read his letter telling how it was done. And best of all any one who will follow the same simple practical rules will be sure to make big money with poultry. Every one who keeps poultry or who is thinking of starting in this business should have a copy of this big **112 Page Book--Free**. Nothing like it has ever been published before. It is filled from cover to cover with splendid illustrations and bristles with money-making—money saving facts. You will be interested in the articles by Prof. W. R. Graham of Guelph, Ontario, "Hatching and Rearing" and "The Automatic Henhouse." Other subjects discussed are "How to Select Layers," "Which Breed is Best," "How to Treat Diseases." Just think of 112 of the 112 pages contain no advertising—just helpful information from the greatest authorities on poultry raising. This book will save you a thousand mistakes and make poultry raising profitable if you will follow the advice it gives.

Write Your Name on a Postal and mail it to us at once. We will send the complete book free and postpaid. You will want to know about the new PRAIRIE STATE INCUBATOR with Sand Tray—also the PRAIRIE STATE UNIVERSAL HOVER BROODERS which you can make at home and save money. All leading agricultural colleges and experiment stations endorse Prairie State incubators because they "hatch chicks that live." Write for free book **Ship your eggs to us and get highest market prices.**
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Women have to do dirty work on the farm as well as the men. Cleaning lamps, blacking stoves, paring potatoes, scrubbing floors and milking, are all hard on the hands.

The thousands who are using SNAP find it exactly what women need, and would not be without a can.

It is a wonderful hand cleaner, instantly removes dirt, stains and odor without much rubbing, and keeps the hands smooth and free of chaps. It is healing and antiseptic. 15c. a can. 114

while he worked, and his gaiety never deserted him.

At his father's death, Corot found himself possessed of a revenue of 40,000 francs, but this opulence did not change his rustic habits. He continued his simple and laborious life. Always up before dawn, he put on his peasant's clothes that he wore all his life, ate his soup, lit his pipe, and, with his box in his hand, and his easel on his shoulder, started for his work, his sonorous voice ringing out joyously.—[G. Chardin, in Putnam's Monthly.]

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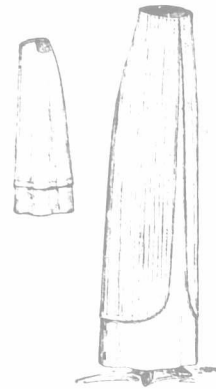
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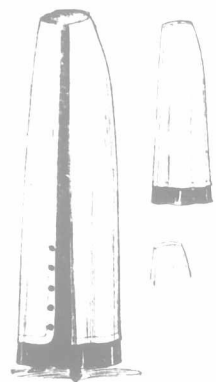
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The Average Man.

By Margaret E. Sangster.

When it comes to a question of trusting Yourself to the risks of the road, When the thing is the sharing of burdens, The lifting the heft of a load, In the hour of peril or trial, In the hour you meet as you can, You may safely depend on the wisdom And skill of the average man.

'Tis the average man and no other Who does his plain duty each day, The small thing his wage is for doing, On the commonplace bit of the way, 'Tis the average man, may God bless him! Who pilots us, still in the van, Over land, over sea, as we travel, Just the plain, hardy, average man.

So on through the days of existence, All mingling in shadow and shine, We may count on the every-day hero, Whom haply the gods may divine, But who wears the swart grime of his calling, And labors and earns as he can, And stands at the last with the noblest, The commonplace, average man.

Call to Your Mate, Bob-White.

By Caze Young Rice.

O call to your mate, bob-white, bob-white, And I will call to mine, Call to her by the meadow-gate, And I will call by the pine,

Tell her the sun is hid, bob-white, The windy wheat sways west, Whistle again, call clear and run To lure her out of her nest,

For when to the copse she comes, shy bird, With Mary down the lane, I'll walk, in the dusk of the forest deep, And to her lover again,

Ay, we will forget our hearts are old, And that our hair is gray, And kiss as we kissed at yore, and say That summer's halcyon day

That day, when a fader, bob-white, bob-white, I'll salute her, calling soft, To be coming—a coming, but not weighed, To stand with the old bob-white,



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This is an extract from a letter written by Mrs. R. A. Colby, of Quebec, Que.

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"Why, I had no idea that faded and worn dresses could be made so beautiful—so almost new—by recoloring.

"And the delightful thing about Diamond Dyes is their simplicity. I think a twelve-year-old child might use them successfully."

Letters come to us constantly from women who have learned the wisdom of using Diamond Dyes instead of always buying new clothes, new portières and rugs, new trimmings, laces, etc., before the old ones have given half service.

Diamond Dyes

There are two classes of Diamond Dyes—one for Wool or Silk, the other for Cotton, Linen, or Mixed Goods. Diamond Dyes for Wool or Silk now come in blue envelopes. And, as heretofore, those for Cotton, Linen, or Mixed Goods are in white envelopes.

Here's the Truth About Dyes for Home Use

Our experience of over thirty years has proven that **no one dye will successfully color every fabric.**

There are two classes of fabrics **animal fibre fabrics** and **vegetable fibre fabrics:** Wool and Silk are animal fibre fabrics; Cotton and Linen are vegetable fibre fabrics. "Union" or "Ilex" goods are 60% to 80% Cotton—so must be treated as vegetable fibre fabrics.

Vegetable fibres require one class of dye, and animal fibres another and radically different class of dye. As proof—we call attention to the fact that manufacturers of woollen goods use one class of dye, while manufacturers of cotton goods use an entirely different class of dye.

Do Not Be Deceived

For these reasons, we manufacture **one class** of Diamond Dyes for coloring Cotton, Linen, or Mixed Goods, and **another class** of Diamond Dyes for coloring Wool or Silk, so that you may obtain the **very best** results on EVERY fabric.

REMEMBER: To get the **best possible** results in coloring Cotton, Linen, or Mixed Goods, use the **Diamond Dyes manufactured especially for Cotton, Linen, or Mixed Goods.**

AND REMEMBER: To get the **best possible** results in coloring Wool or Silk, use the **Diamond Dyes manufactured especially for Wool or Silk.**

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The Wells & Richardson Co., Ltd.
Montreal, Que.

The Scarlet Pimpernel.

A STORY OF ADVENTURE.

By Baroness Orczy.

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(Continued from last week.)

CHAPTER VII.

The Secret Orchard.

Once outside the noisy coffee-room, alone in the dimly-lighted passage, Marguerite Blakeney seemed to breathe more freely. She heaved a deep sigh, like one who had long been oppressed with the heavy weight of constant self-control, and she allowed a few tears to fall unheeded down her cheeks.

Outside the rain had ceased, and through the swiftly passing clouds, the pale rays of an after-storm sun shone upon the beautiful white coast of Kent and the quaint, irregular houses that clustered round the Admiralty Pier. Marguerite Blakeney stepped on to the porch and looked out to sea. Silhouetted against the ever-changing sky, a graceful schooner, with white sails set, was gently dancing in the breeze. The Day Dream it was, Sir Percy Blakeney's yacht, which was ready to take Armand St. Just back to France, into the very midst of that seething, bloody Revolution which was overthrowing a monarchy, attacking a religion, destroying a society, in order to try and rebuild upon the ashes of tradition a new Utopia, of which a few men dreamed, but which none had the power to establish.

In the distance two figures were approaching "The Fisherman's Rest": one, an oldish man, with a curious fringe of gray hairs round a rotund and massive chin, and who walked with that peculiar rolling gait which invariably betrays the seafaring man; the other, a young, slight figure, neatly and becomingly dressed in a dark, many caped overcoat; he was clean-shaven, and his dark hair was taken well back over a clear and noble forehead.

"Armand!" said Marguerite Blakeney, as soon as she saw him approaching from the distance, and a happy smile shone on her sweet face, even through the tears.

A minute or two later brother and sister were locked in each other's arms, while the old skipper stood respectfully on one side.

"How much time have we got, Briggs?" asked Lady Blakeney, "before M. St. Just need go on board?"

"We ought to weigh anchor before half an hour, your ladyship," replied the old man, pulling at his grey forelock.

Linking her arm in his, Marguerite led her brother towards the cliffs.

"Half an hour," she said, looking wistfully out to sea, "half an hour more and you'll be far from me, Armand! Oh! I can't believe that you are going, dear! These last few days—whilst Percy has been away, and I've had you all to myself, have slipped by like a dream."

"I am not going far, sweet one," said the young man gently, "a narrow channel to cross—a few miles of road—I can soon come back."

"Nay, 'tis not the distance, Armand—but that awful Paris . . . just now . . ."

They had reached the edge of the cliff. The gentle sea-breeze blew Marguerite's hair about her face, and sent the ends of her soft lace fichu waving round her, like a white and supple snake. She tried to pierce the distance far away, beyond which lay the shores of France: that relentless and stern France which was exacting her pound of flesh, the blood-tax from the noblest of her sons.

"Our own beautiful country, Marguerite," said Armand, who seemed to have divined her thoughts.

"They are going too far, Armand," she said vehemently. "You are a republican, so am I . . . we have the same thoughts, the same enthusiasm for liberty and equality . . . but even you must think that they are going too far . . ."

"What?" said Armand, instinctively.



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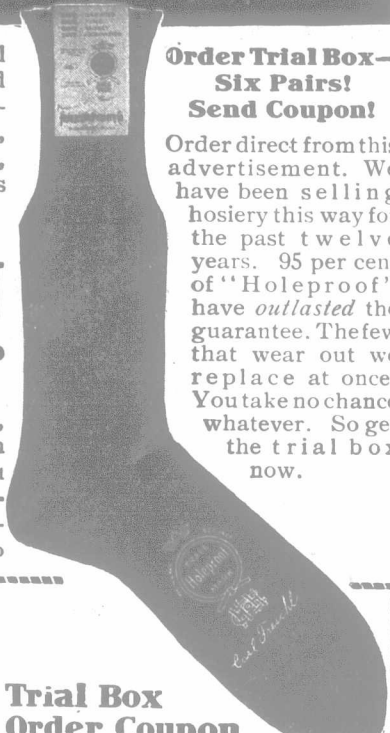
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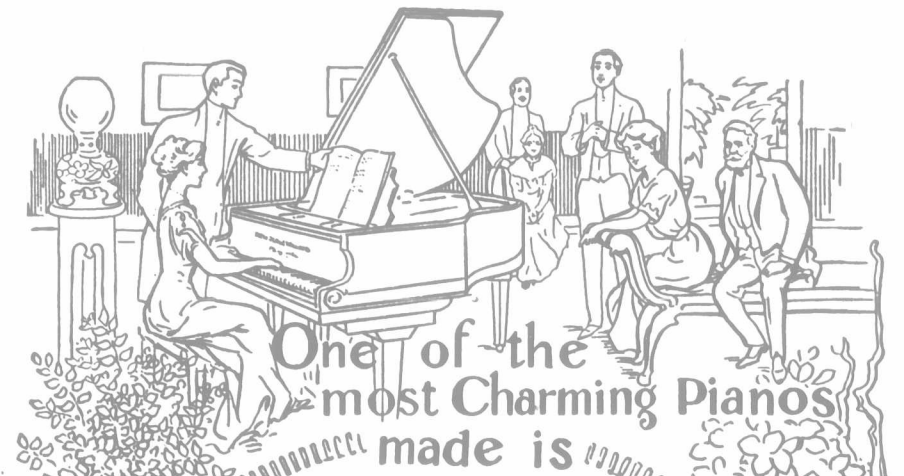
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—Louise Homer

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as he threw a quick, apprehensive glance around him.

"Ah! you see: you don't think yourself that it is safe even to speak of these things—here in England!" She clung to him suddenly with strong, almost motherly, passion: "Don't go, Armand!" she begged; "don't go back! What should I do if . . . if . . . if . . ."

Her voice was choked in sobs, her eyes, tender, blue and loving, gazed appealingly at the young man, who in his turn looked steadfastly into hers.

"You would in any case be my own brave sister," he said gently, "who would remember that, when France is in peril, it is not for her sons to turn their backs on her."

Even as he spoke, that sweet, child-like smile crept back into her face, pathetic in the extreme, for it seemed drowned in tears.

"Oh! Armand!" she said quaintly, "I sometimes wish you had not so many lofty virtues. . . I assure you little sins are far less dangerous and uncomfortable. But you will be prudent?" she added earnestly.

"As far as possible . . . I promise you."

"Remember, dear, I have only you . . . to . . . to care for me. . ."

"Nay, sweet one, you have other interests now. Percy cares for you. . ."

A look of strange wistfulness crept into her eyes as she murmured,—

"He did . . . once . . ."

"But surely . . ."

"There, there, dear, don't distress yourself on my account. Percy is very good. . ."

"Nay!" he interrupted energetically. "I will distress myself on your account, my Margot. Listen, dear, I have not spoken of these things to you before; something always seemed to stop me when I wished to question you. But,

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MONTREAL 31

somehow, I feel as if I could not go away and leave you now without asking you one question. . . You need not answer it if you so wish," he added, as he noted a sudden, sad look, almost of apprehension, glancing through her eyes.

"What is it?" she asked, simply.

"Does Sir Percy Blakeney know that . . . I mean, does he know the part you played in the arrest of the Marquis de St. Cyr?"

stances; he heard the story from other sources; my confession came too tardily, it seems. I could no longer plead extenuating circumstances: I could not believe myself by trying to explain—"

"And?"

"And now I have the satisfaction, Armand, of knowing that the biggest fool in England has the most complete contempt for his wife."

She spoke with venement bitterness this time, and Armand St. Just, who loved her so dearly, felt that he had placed a somewhat clumsy finger upon an aching wound.

"But Sir Percy loved you, Margot," he repeated gently.

"Loved me? Well, Armand, I thought at one time that he did, or I should not have married him. I daresay," she added, speaking very rapidly, as if she were glad at last to lay down a heavy burden, which had oppressed her for months, "I daresay that even you thought—as everybody else did—that I married Sir Percy because of his wealth—but I assure you, dear, that it was not so. He seemed to worship me with a curious intensity of concentrated passion, which went straight to my heart. I had never loved any one before, as you know, and I was four-and-twenty then—so I naturally thought that it was not in my nature to love. But it has always seemed to me that it must be heavenly to be loved blindly, passionately, wholly . . . worshipped, in fact—and the very fact that Percy was slow and stupid was an attraction for me, as I thought he would love me all the more. A clever man would naturally have other interests, an ambitious man other hopes. . . I thought that a fool would worship, and think of nothing else. And I was ready to respond, Armand; I would have allowed myself to be worshipped, and given infinite tenderness in return. . ."





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O. A. C. No. 21 Seed Barley

We have another grand supply of this most excellent barley ready for distribution, mostly grown after corn and roots; yield excellent; sample good. We increased one pound to nine hundred bushels in three crops. Price, \$1.25 bushel. Also a quantity of the Improved Siberian and New Danish White Oats. Great yielders; good sample. Price, sixty cents per bushel, f.o.b. Best cotton bags, twenty-five cents. Jno. Elder & Sons, Hensall, Ont.; Huron Co.

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She sighed—and there was a world of disillusionment in that sigh. Armand St. Just had allowed her to speak on without interruption: he listened to her, whilst allowing his own thoughts to run riot. It was terrible to see a young and beautiful woman—a girl in all but name—still standing almost at the threshold of her life, yet bereft of hope, bereft of illusions, bereft of those golden and fantastic dreams, which should have made her youth one long, perpetual holiday.

Yet perhaps—though he loved his sister dearly—perhaps he understood: he had studied men in many countries, men of all ages, men of every grade of social and intellectual status, and inwardly he understood what Marguerite had left unsaid. Granted that Percy Blakeney was dull-witted, but in his slow-going mind, there would still be room for that ineradicable pride of a descendant of a long line of English gentlemen. A Blakeney had died on Bosworth Field, another had sacrificed life and fortune for the sake of a treacherous Stuart; and that same pride—foolish and prejudiced as the republican Armand would call it—must have been stung to the quick on hearing of the sin which lay at Lady Blakeney's door. She had been young, misguided, ill-advised perhaps. Armand knew that: and those who took advantage of Marguerite's youth, her impulsiveness and imprudence, knew it still better; but Blakeney was slow-witted, he would not listen to "circumstances," he only clung to facts, and these had shown him Lady Blakeney denouncing a fellow-man to a tribunal that knew no pardon: and the contempt he would feel for the deed she had done, however unwittingly, would kill that same love in him, in which sympathy and intellectuality could never have had a part.

Yet even now, his own sister puzzled him. Life and love have such strange vagaries. Could it be that with the waning of her husband's love, Marguerite's heart had awakened with love for him? Strange extremes meet in love's pathway; this woman, who had had half intellectual Europe at her feet, might perhaps have set her affections on a fool. Marguerite was gazing out towards the sunset. Armand could not see her face, but presently it seemed to him that something which glittered for a moment in the golden evening light, fell from her eyes onto her dainty fichu of lace.

But he could not broach that subject with her. He knew her strange, passionate nature so well, and knew that reserve which lurked behind her frank, open ways.

They had always been together, these two, for their parents had died when Armand was still a youth, and Marguerite but a child. He, some eight years her senior, had watched over her until her marriage; had chaperoned her during those brilliant years spent in the flat of the Rue de Richelieu, and had seen her enter upon this new life of hers, here in England, with much sorrow and some foreboding.

This was his first visit to England since her marriage, and the few months of separation had already seemed to have built up a slight, thin partition between brother and sister; the same deep, intense love was still there, on both sides, but each now seemed to have a secret orchard, into which the other dared not penetrate.

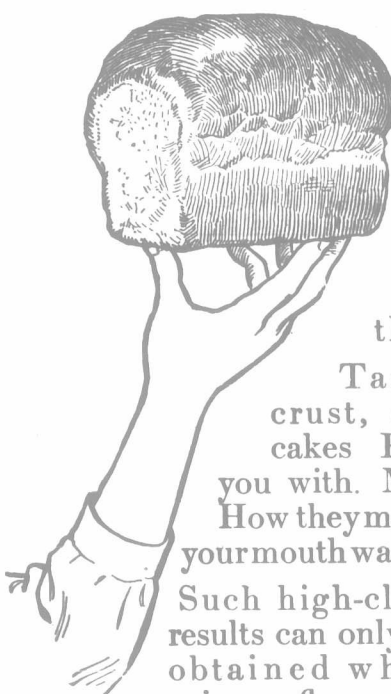
There was much Armand St. Just could not tell his sister; the political aspect of the revolution in France was changing almost every day; she might not understand how his own views and sympathies might become modified, even as the excesses, committed by those who had been his friends, grew in horror and in intensity. And Marguerite could not speak to her brother about the secrets of her heart; she hardly understood them herself, she only knew that, in the midst of luxury, she felt lonely and unhappy.

And now Armand was going away; she feared for his safety, she longed for his presence. She would not spoil these last few sadly-sweet moments by speaking about herself. She led him gently along the cliffs, then down to the beach; their arms linked in one another's, they had still so much to say, that lay just outside that secret orchard of theirs.

(To be continued.)

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AND
Pick All Fruit

Twenty thousand trees like illustration for spring delivery, 1912.

Tree—Vigorous grower, hardy, a prolific and early bearer.

Fruit—Large, good color and quality, and a splendid stripper.

Send for descriptive circular and prices.

ORDER NOW
AGENTS WANTED

STONE & WELLINGTON, Toronto, Ontario

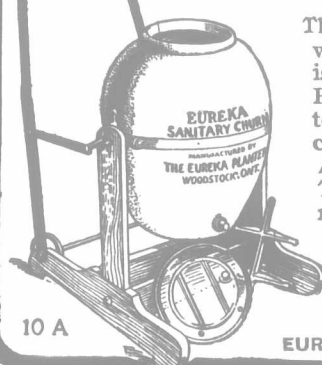
TO LET
IN WINNIPEG, MAN.

Office, Warehouse or Manufacturing Space.

The Farmer's Advocate of Winnipeg, Limited, purpose erecting a large fireproof building on Notre Dame St., Winnipeg, this spring. Flats 40 x 122 also 35 x 90 feet; splendidly lighted, steam heated, use of elevator, desirable location. Can be laid out to suit tenants if application is made at once. Apply:

The William Weld Co., Ltd., London, Ont.

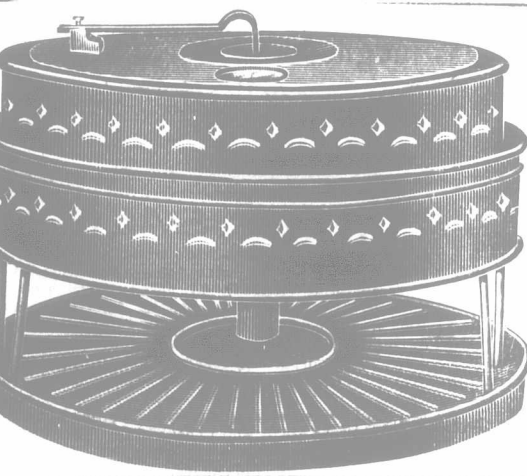
EUREKA
SANITARY CHURN



There's no comparison between the ordinary wooden churn and the "EUREKA". Barrel is stoneware—top is clear glass. Besides being absolutely sanitary, the glass top enables you to see how the churning is coming along without opening the churn. Also made with Aluminum top.

The "EUREKA" is the easiest churn on the market to operate. By tilting back the frame until the weight rests on the wheels, the churn can be quickly and easily moved—while the barrel remain upright.

If your dealer does not handle the "EUREKA," do not take a substitute but write us for catalogue. **EUREKA PLANTER CO. LIMITED, WOODSTOCK, ONT.**



IMPROVED MODEL CYCLE HATCHER

A Twentieth Century Wonder hatches every hatchable egg. Easily operated. Fireproof. Glass window, so that thermometer can be seen at all times. Weight, securely boxed, 20 lbs. Price, \$7.00. We carry in stock all sizes of Incubators (hot air and hot water), Poultry Supplies and Poultry Foods.

The Model Incubator Co., Ltd.
196 River St. TORONTO

GOSSIP.

The bull calf recently dropped by Dolly Dimple, the noted world's-record Guernsey cow, owned by F. Lathrop Ames, of Massachusetts, has been sold to M. H.

Tichenor, of Wisconsin, for \$6,000, which is said to be the highest price ever paid for a cow. The calf is to be sold when six months old.

News of the Week.

Mr. J. Ross Robertson has presented a valuable collection of historic paintings to the Toronto Public Library.

The Woodside plant of the Acadia Sugar Refining Co., Halifax, was destroyed by fire last week, with a loss of over a million, fairly well insured.

The question of Ontario's north-western boundary, involving the securing of a port on Hudson's Bay, is exciting much interest.

The Canadian Government has ordered the thorough disinfection of all hair imported from China, importations having increased greatly owing to the demands of fashion, and the wholesale sacrifice of queues in China.

A natural gas volcano, three acres of land with a gas-jet in the center, has burst out of the ocean near Trinidad. By some unknown agency, the gas caught fire, and burnt for a time in a flame ascending 1,000 feet.

John Henniker Heaton, known as the Father of Penny Postage, was recently made a baronet by the King.

The Empress of China has issued an edict sanctioning the establishment of a Northern Republic, over which, presumably Yuan Shi Kai might be given supreme power of organization. Reports state that the Republicans in the South will only agree to a Coalition Government, with the capital at Nankin. They may accept Yuan Shi Kai as President of the whole on condition that Dr. Sun Yat Sen be made Premier.

TRADE TOPIC.

"ARGUMENTS IN FAVOR OF HOME MIXING."

Extract from "Artificial Fertilizers: Their Nature and Use," by B. Leslie Emslie, C.D.A., F.C.S., P.A.S.I.

"1. Economy: Usually at least 25 per cent. is saved in purchasing the separate ingredients. There is no useless 'filler' to add to the freight charges; there is no duty on the separate ingredients, whereas the farmer must bear the cost of the duty imposed on the ready-mixed fertilizers when these are imported from the United States.

"2. Assurance: The farmer who purchases the separate ingredients, especially if he insists on getting the goods in the original sacks, knows exactly what he is getting for his money; whereas the purchase of a ready-mixed brand is more often like buying a 'pig in a sack.'

"3. Adaptation: With a stock of the separate ingredients on hand, the farmer is enabled to make up his mixtures according to prescriptions which he has prepared to suit the varying requirements of the different crops and soils.

"From this short resume, each farmer may judge for himself whether, in his case, it will pay him to purchase the separate ingredients in preference to the ready-mixed goods."

Farmers may obtain copies of this, as well as other important bulletins on this important subject, by applying to The German Potash Syndicate, 1106 Temple Building, Toronto, Ont. Advt.

GOSSIP.

Three good farms in the fine counties of Peel and Halton, Ont., within a few miles of such prosperous towns and railway stations as Brampton, Georgetown, and Cheltenham, are advertised for sale in this issue by J. A. Willoughby, Georgetown, Ont.

A. C. Wells & Son, Chilliwack, B. C., have had the honor of winning the first prize, a handsome silver cup, for the best dairy farm in the Province of British Columbia. Those who have had the pleasure of visiting the Bank Farm are acquainted with its surroundings, and would, doubtless, be well pleased to learn that

This Home-made Cough Syrup Will Surprise You

Stops Even Whooping Cough Quickly. A Family Supply at Small Cost.

Here is a homemade remedy that takes hold of a cough instantly, and will usually cure the most stubborn case in 24 hours. This recipe makes 16 ounces—enough for a whole family. You couldn't buy as much or as good ready-made cough syrup for \$2.50.

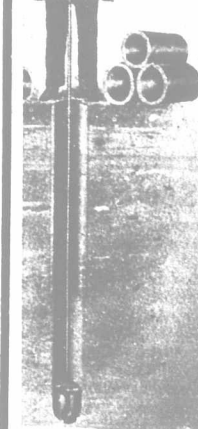
Mix two cups of granulated sugar with one cup of warm water, and stir two minutes. Put 2½ ounces of Pinex (fifty cents' worth) in a 16-ounce bottle, and add the Sugar Syrup. This keeps perfectly and has a pleasant taste—children like it. Braces up the appetite and is slightly laxative, which helps end a cough.

You probably know the medical value of pine in treating asthma, bronchitis, and other throat troubles, sore lungs, etc. There is nothing better. Pinex is the most valuable concentrated compound of Norway white pine extract, rich in guaicol and all the natural healing pine elements. Other preparations will not work in this formula.

The prompt results from this inexpensive remedy have made friends for it in thousands of homes in the United States and Canada, which explains why the plan has been imitated often, but never successfully.

A guaranty of absolute satisfaction, or money promptly refunded, goes with this recipe. Your druggist has Pinex, or will get it for you. If not, send to The Pinex Co., Toronto, Ont.

You can dig 40-foot Wells quickly through any Soil with our Out-fit at \$12.00 delivered



Write us to-day, and learn how you can start a profitable business digging wells for others on an investment of but \$12.00.

Works faster and simpler than any other method.

WRITE TO-DAY

Canadian Logging Tool Co., Ltd.
Sault Ste Marie (Ontario).

COMPARISON IN GROWTH OF TOMATO

Each the same number of days from seed, but started at different intervals of the MOON'S INFLUENCE.

My free book **SCIENCE AND AGRICULTURE** tells of MOON'S INFLUENCE over plant growth. Planters of truck for market sale, or those with home gardens should not miss this instructive book. 15,000 copies already mailed—let me send you one. A living from city garden growing tomatoes early. Write today.

FRANK H. GREGORY, Gregory Farm, Bay City, Mich.
61 Falcrosses.

CLOVER SEED

Buy direct from the dealer—no middleman—specially selected from clean farms, and re-cleaned for seed stock. Sold under Government Laboratory test. Put up in sealed bags. Samples and prices furnished on application.

BROWN BROS., Arkona, Ont.
Lambton's Largest Seed Dealers.

MENTION "FARMER'S ADVOCATE."

QUESTIONS AND ANSWERS. Miscellaneous.

DEFECTIVE EYES.

I have a pullet which is partially blind. She looks well. Her comb is very red. Had I better get rid of her, or is there any cure? A SUBSCRIBER.

Ans.—If she is otherwise healthy, and can see well enough to find the nest and lay a sufficient number of eggs to make a satisfactory profit on her feed and care keep her, if not do away with her.

BALED HAY WANTED.

Could you tell me through your paper where I could get good baled hay? W. N. H.

Ans.—Advertise in our Want and For Sale column. Those having hay to sell would also find this course to their advantage. Replies to such inquiries made through the editorial columns will not be forwarded. Advertising is our main source of revenue, and we cannot do it free. If we did we would soon be out of business.

Veterinary.

MISCELLANEOUS.

1. Horse is very nervous. We keep him in a box stall, but he lies down only about once monthly. When he eats he holds his head forward and grunts. He walks stiff and has difficulty standing on three legs if the other be held up. He passes worms and is run down, long-haired and has little life. His hind feet are dry and powdery, and he has thrush.

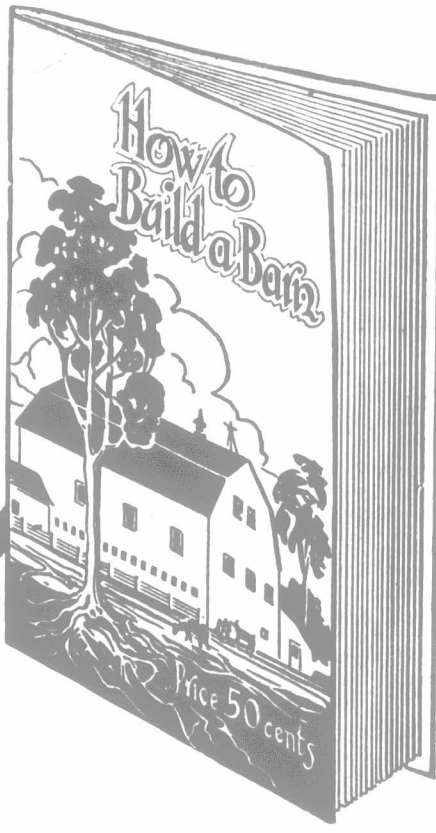
2. Mare took fits last summer. When walked fast up hill or excited she would fall. She is better now, but one hip is lower than the other, and she travels sideways.

3. Cows have lice.

NEW SUBSCRIBER.

Ans.—1. No means can be devised to cause him to lie down, other than providing him with a well-bedded box stall. Get your veterinarian to dress his teeth. The stiffness is probably due to soreness of the feet, caused by standing too much in stable without moisture to the feet. Poulticing the feet will remedy this. For the worms, take 3 ozs. of sulphate of iron, sulphate of copper and tartar emetic; make into 24 powders, and give a powder every night and morning. After the last one has been taken, give a purgative of 7 drams aloes and 2 drams ginger. After this feed well and give daily exercise. For the thrush, add 2 parts water to 1 part liquid formaldehyde, and put a few drops into the cleft of the frog daily until cured. Blistering the coronet repeatedly will tend to improve the quality of the feet and cause them to grow. Blister with 2 drams each of biniodide of mercury and cantharides, mixed with 2 ozs. vaseline. Clip hair off two inches high all around the hoof. Tie so that he cannot bite the parts. Rub well with the blister once daily for 2 days, then apply sweet oil daily until the scale comes off. Let his head down as soon as you oil, and you can exercise him. Blister every month.

2. This was stomach staggers. Treatment consists in bleeding from jugular vein. Take about 1 1/2 gallons of blood, and in a few days give a purgative of 8 drams aloes and 2 drams ginger. It is



Send for this book to-day

How Would You Build a Barn?

WHERE would you put it? How big should it be? How ought it to be arranged inside? What provision would there be for storing crops? How would you provide for convenient feeding; for removal of manure, for easy access to stalls, store-rooms, hay-loft and feed-bins? What materials should you use—for foundations, for framing, for siding and for roofing?

In short, how would you plan the building so as to get the greatest possible barn value out of the money and labor invested?

These are a few of the questions you must answer before starting the foundation trench.

They're all answered in our handsome free book,

"How to Build a Barn"

This book contains complete plans and specifications for all varieties of barns. It is written for Canadian farmers, and every barn described is designed for Canadian weather conditions. The descriptions aren't just general "ideas"—they are carefully-prepared architect's specifications, expressed so plainly that anyone can understand them. Dimensions, requirements for materials, method of erection and all other details are carefully explained. Drawings show floor plans, front and side elevations and framing details.

The book also describes Galt Steel Shingles—the shingles that are lightest, most easily placed, that do not require painting, are fire-proof, lightning-proof, rain-proof and wind-proof.

The book was published to sell at 50 cents. But we've decided for a time to send a copy free to any farmer who writes for it.

Send your name and address to-day. The book will be sent you by return mail.

GALT ART METAL COMPANY, LTD.

150 Stone Road, GALT, ONTARIO

BRANCHES:

- Wm. Gray Sons—Campbell, Ltd., 583 St. Paul St., Montreal
Galt Art Metal Co., Ltd., 839 Henry Ave., Winnipeg, Man.
J. L. Lachance, Ltd., 253 St. Paul St., Quebec, Que.
Montague Sash and Door Factory, Montague, P.E.I.
Gorman, Clancey & Grindley, Ltd., Edmonton, Alta.
D. R. Morrison, 714 Richard St., Vancouver, B.C.
Gorman, Clancey & Grindley, Ltd., Calgary, Alta.
General Contractors Supply Co., Halifax, N.S.
R. Chestnut & Sons, Fredericton, N.B.
Fife Hdwe. Co., Fort William, Ont.
Estey & Co., St. John, N.B.

Send me your book on Barns.

F.A.

almost impossible to prevent the attacks in an animal predisposed to them.

3. Mix 1 part creolin with 24 parts water; heat to 100 degrees Fahr., and give the cattle a thorough washing once weekly until lice cease to hatch. V.

LUMP ON FLANK—JOINT-ILL.

1. Cow has a lump the size of a man's fist on flank. It has been there nearly a year, and is growing. It is hard and attached to a cord that runs up the flank.

2. Will saltpetre generally cure joint-ill in colts? I cured a bad case with it last year. P. M.

Ans.—1. This is a tumor, and dissection is the only means of cure. Unless it attains sufficient size to interfere with the animal's comfort it will be wise to leave it alone. If necessary to operate it will be wise to employ a veterinarian, as the walls of the abdominal cavity may be involved.

2. No. You have made a record, as this is the only case of joint-ill that has ever been cured this way, so far as known. We trust you will pardon us when we say that we are somewhat skeptical about the correctness of your diagnosis. V.

GOSSIP.

The attention of readers interested in the rural telephone is called to the new advertisement in this issue of the Century Telephone Construction Co., offering free of cost their booklet, giving information on how to organize rural companies; how to build rural lines, etc. Instruments are also offered on 60 days' trial. Address: Century Telephone Construction Co., Bridgeburg, Welland Co., Ont., or Buffalo, N.Y.

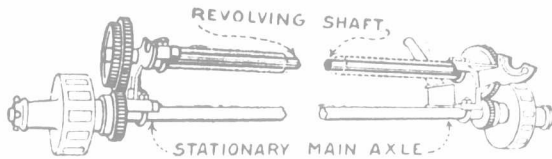
Messrs. Richard Honey & Sons, Minster Farm, Brickley, Ontario, breeders of Holsteins and Yorkshires, ordering a change in their advertisement, write: We are completely sold out of young bulls, some of our recent sales being to Thos. A. Bailey, Winchester, a son of Snowflake Queen De Kol of Minster, whose R.O.P. record is 13,089 lbs. milk and 443 lbs. fat; she has since given 2,054 1/2 lbs. milk in 30 days. Jere Wallace, Jr., Shanly, Ont., secured the first-prize bull calf at the East Peterboro Exhibition; his dam is Queen Calamity Jane De Kol, a daughter of Queen of Minster, that gave 84 1/2 lbs. milk in one day. William R. May, Castleton, secured a son of May Snowflake De Kol. She gave 7,808 1/2 lbs. milk in one season as a two-year-old, under unfavorable circumstances. She has two R.O.P. sisters. To H. Brannen, Chute-a-Blondeau, went a son of Fairmont Minster De Kol, a granddaughter of our foundation cow, Minster Maid. She gave 73 lbs. of 4.2% milk in one day. All of the above-mentioned calves are sired by Lakeview Burke Fayne, whose dam and sire's dam average 23.14 lbs. butter in 7 days, and his sire has five sisters that average 31.66 lbs. butter in 7 days. Sandy Matchett, Stuart Hall, Ont., purchased a choice pair of yearling heifers, one from Snowflake Queen De Kol of Minster, and the other from Queen of Minster. Their sire is a son of Prince Posch Calamity, whose dam and sire's dam average 26.10 lbs. butter in 7 days. The Yorkshires we are offering are a choice lot, being of the right bacon type and from prizewinning stock at the leading exhibitions of the district.

Now-a-Days Every Farmer Demands a Drill in Which the Feed is Driven From Both Wheels



THE LEADER

To obtain this most manufacturers have changed the construction of their Drills, and made the main axle revolve. This is a fatal mistake. A stationary axle fastened to the frame helps to make the Drill rigid and strong, and of light draft. A Revolving Axle makes a heavy, cumbersome Drill, with exceedingly heavy draft.



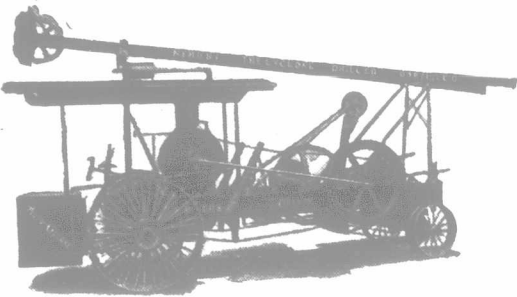
See how we overcome this difficulty. By going to the additional expense of adding a second shaft running the full length of the machine parallel to the main axle.

Results—Easiest Draft Drill in Canada; Frame Rigid and Gears kept in perfect mesh, giving perfect sewing; fewer parts to wear out or get out of adjustment; many other exclusive good features.

See our Agent about them.

The Peter Hamilton Co., Limited Peterborough Ontario

Do You Use Care With the Milk Cans?



If you clean them with surface water from shallow wells, you are taking chances.

Protect yourself and your customers, by using clean, pure water from great depth, secured by the use of

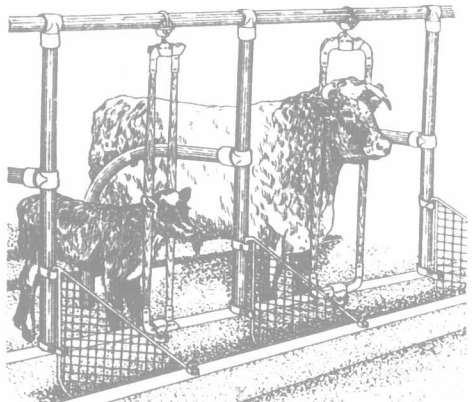
CYCLONE WELL DRILLS

WRITE FOR CATALOGUE F.A. 60

MUSSENS LIMITED

Montreal, Toronto, Cobalt, Winnipeg, Calgary, Vancouver

Stable Your Cattle the Superior Way



The SUPERIOR is the only adjustable stanchion that you can adjust to tie from your smallest calf to your largest export steer.

We want every stockman and dairyman who is thinking of building a new barn, or remodeling his present one, to write for our free book on stable equipment.

It Will Be Dollars in His Pocket

Now is the time to lay your plans and get all the information you can, and no time like now when your barn is completed.

I Wish That I Had Done So and So

Drop us a card today and your book will go forward to you by return mail. Please mention this paper.

THE SUPERIOR BARN EQUIPMENT CO.
FERGUS - ONTARIO

Cane Molasses

FOR

LIVE STOCK FEEDING

We have a nice quality CANE MOLASSES, that we are offering to stock raisers at a very reasonable price.

We are receiving repeat orders for this Molasses daily.

Highly recommended by the best known cattle men.

Write us for full particulars.

Dominion Sugar Company, Limited

WALLACEBURG, ONTARIO

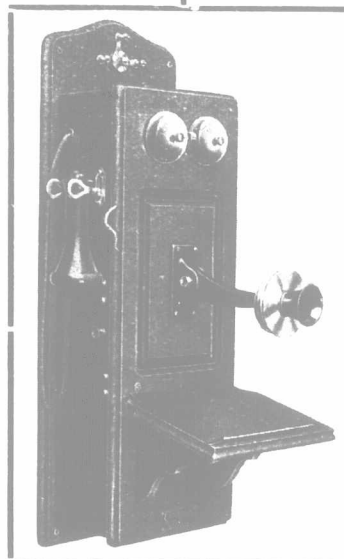
WRITE TO-DAY FOR A COPY OF

THE RURAL TELEPHONE

It gives information on how to organize rural companies. How to build rural lines, etc. Free on request.

If you are already interested in a Telephone Co. and are not equipped with Century equipment, let us send you two or more instruments on 60 days' trial.

Century Telephone Construction Co.
Bridgeburg, Ont. Buffalo, N. Y.



QUESTIONS AND ANSWERS. Miscellaneous.

HEIFER LOSES CALF.

I have a young Jersey heifer that lost her calf. She was about four months gone. I cannot give any reason why it should happen. Would it be wise to milk her? She gives about two quarts at a milking. Would she make a better cow if we continue milking, or should we let her go dry till she comes in again?

P. M.

Ans.—If the heifer is well grown and thriving, it would likely prove as satisfactory to continue milking her. Heifers usually make better cows if milked regularly over a long period in their first lactation. Of course, if she is very young, it might be as well to dry her off.

FARMING ON SHARES.

A rents his farm on shares to B. A is to pay 60 per cent. of all expenses, and B is to pay 40 per cent. of such expenses. The expenses are to include all items such as taxes, insurance, the purchase of seed, and all other expenses in connection with the working and operation of the farm. A gets 60 per cent. profit and B 40 per cent. B is to leave on the farm the same amount of feed as there was when he took possession, and of a like quality. Would that mean that B would have to replace the whole of anything that was stored, or only 40 per cent. of it? Or should B go up to the amount, and then buy what he requires so as each to pay his share? Now, the ice house was full when B took possession. B has to buy ice, and should he pay for all, or only his share? Ontario.

SUBSCRIBER.

Ans.—We think that B should contribute 40 per cent. of feed and of expenses of ice and other supplies requisite to the proper operation of the farm.

How Would You Like to Have the Skimming Done When the Milking's Done?

HERE'S what farmers and dairymen have been waiting for—now done in one machine, THE AUTOMATIC—brought up in 15 seconds to full steady speed. Runs for hours without watching or attention. Skims closest, regardless of temperature of milk as proven by Government and State and private users' tests told about in our book. One size for every size dairy. Capacity enough to skim faster than 10 men can milk, and the most dependable, most sanitary, economical and money-making separator, whether you have 5 cows or 300.

Delivered On Your Place With Demonstration—At a Low Price That Will Astonish You

Most liberal guarantee and selling plan on the AUTOMATIC that you ever heard of—at a price so low for this combination machine, with or without its other power uses attachments, that you'll be delighted that you wrote to us to investigate the AUTOMATIC, with all of the combination work it will do, including any work on the place that man or woman power can do. A genuine 20th Century Wonder. Book tells all, including all about the AUTOMATIC ELECTRIC LIGHTING PLANT to be used in connection with our AUTOMATIC Engine—Just send your name so we can mail you at once our big AUTOMATIC Book—just off the press for 1912—the most complete and largest book on cream separators, and contains more money-making facts with big illustrations to prove them, both for farmers and dairymen, no matter how big a dairy you have—or where you live. Investigate and know the facts whether you buy from us or not. Write and get our

Big News Book Free

Decide now to write your postal or letter today, and mail it for our big book which you make out save you many dollars if you will let it.

Standard Separator Company

Morton Decker, President

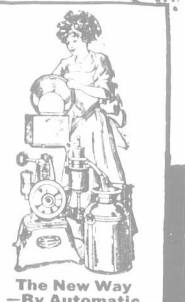
Sole Manufacturers and Patentes;

273 Reed Street

MILWAUKEE, U. S. A.



The Old Way—By Rackache



The New Way—By Automatic

The AUTOMATIC
Self-Contained Combination
Gasoline Engine and Cream Separator

Send Name on a postal TODAY, and be sure to ask for our FREE BOOK 10

Subscribe for The Farmer's Advocate

SHEEP ON SHARES.

What is the best way to let sheep out on shares for a three-year term? A man got five sheep on shares, and he told me the rule was to give me the same five back and five lambs with them, but my sheep would be five years old at the end of three years, and I consider that it will take the ewes and the lambs both to be worth as much as the ewes when he got them, because the ewes would be so much older.

W. E.

Ans.—Various methods of breeding sheep on shares are followed. In some cases the tenant gets only half the progeny, and half the wool. This seems rather expensive borrowed capital. If good stock is provided, and a good ram used, the owner of the sheep should do very well if he gets one-third the value of the wool, and one-third of the progeny. In fact, in many cases we have known the owner to reap satisfactory returns by getting one-third of the progeny, giving the tenant the wool and two-thirds of the lamb crop. Four items of expense enter into the letting out of sheep, viz.: Interest on the value of the ewe, depreciation in value, ram's service, and risk. These must be considered in making the agreement.

Veterinary.

ABSCESSSES OF HOCK.

Filly sprained her leg a month ago. It has now settled in her hock, which has broken out, and is discharging matter in four places.

A. A.

Ans.—If she is very lame, and refuses to put any weight upon the foot, place her in slings. Apply hot poultices of linseed meal to the hock, and flush out the openings three times daily with 1 part carbolic acid to 25 parts warm water. Give internally 3 drams hypsulphate of soda three times daily. V.

QUESTIONS AND ANSWERS. Miscellaneous.

NEW ONTARIO.

Would you please publish in your paper where information regarding New Ontario could be had? Would it be advisable for two young men with good health but small means to locate there?

Ans.—Write the Director of Colonization, Parliament Buildings, Toronto. New Ontario offers many advantages to ambitious, energetic young men.

PIG FEEDING—LYMPHANGITIS.

1. Which is the most profitable feed for pigs weighing over one hundred pounds, good low-grade flour at thirty dollars a ton, corn germ at twenty-nine dollars a ton, or good wheat at eighty-five cents a bushel, chopped fine?

2. We have a young mare, four years old, which had lymphangitis about a month ago. We had a veterinarian who treated her. She was in foal, and she lost her foal. The soreness seems to have gone out of the leg, but it is still swelled quite hard. She gets plenty of exercise, and we bathe it in hot water, and are giving her saltpetre in bran twice a week. What is the best to do with her, and how to reduce the swelling?

Ans.—1. The wheat would likely prove the cheapest feed at these prices. With any of these we would advise mixing with the coarser grains.

2. Your veterinarian doubtless prescribed correctly. Repeated and severe attacks often leave an enlarged leg. Give regular exercise, feed lightly, hand-rub and bandage the leg. If the soreness and lameness has disappeared this treatment should dissipate the swelling. If the swelling does not go down, give 1 dram of iodide of potassium, night and morning. If this affects the appetite the dose should be reduced to 30 or 40 grains.

SWITCHER—INVERSION OF THE UTERUS.

1. I have a nice Hackney filly which I wish to break single, but she seems inclined to switch and urinate, more, I believe, from being a little nervous. I have had her hitched double. She does not kick, only switches. Drove her around with single harness only; acts much the same. Have you any suggestion to offer?

2. Is it advisable to breed a cow which expels her womb at parturition?

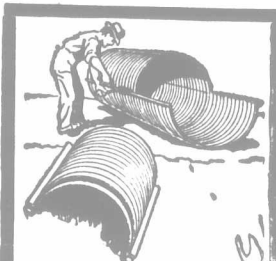
Ans.—Switching is a bad habit in any horse, and one which is difficult to break. Switchers require careful handling while being driven. Avoid all harsh usage. Whipping aggravates the trouble. Switchers are, as a rule, high-spirited horses. Sometimes a slow mate causes the trouble. Some recommend hard work and cutting down the grain ration, so as to reduce the animal's spirit. Whether or not this would prove satisfactory is a question. A very thick crupper arranged so as to raise the tail, has been used to good advantage. Docking has been resorted to with good effect in some instances. It is necessary to study the colt's disposition, and treat her kindly at all times. A correspondent writing in 'The Farmer's Advocate' some time ago, recommended the following to break young colts of the habit: Take two straps about one inch wide that will reach from the crupper to the breeching. Have loops made in both ends of these straps so that the crupper can run through one end; the other end is for the breeching to be slipped through (the latter loop should be large enough to permit the strap to slide on the breeching easily). Have two small straps with handles attached, sew one small strap on each of the larger ones crosswise, about six inches from the top of the loop through which the crupper will run. Place one on each side of the mare and buckle the small straps around the bone of her tail under the hair. With this appliance she can move her tail, but not far enough to catch the line.

2. If the cow is otherwise healthy, there should be little danger in breeding her again. Some two or three months should be allowed between calving and re-breeding. If at subsequent parturitions the same trouble is experienced, it might be advisable to discontinue.

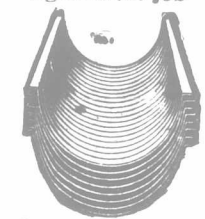
FREE to FARMERS, REEVES and MUNICIPAL OFFICERS

a Sample of the Easiest Laid, Strongest Frost-proof Culvert Ever Made for Farms and Roads, with Book of Facts.

EVERY farmer wants to reduce his taxes and statute labor. Pedlar's strong, non-rusting corrugated culvert saves excavation hauling and time, and makes a culvert that will not wash out or cave in like brick or cement. Much better than wood. Needs no attention. Time you now give to culvert repairs can be given to the road surface only. Learn about Pedlar culvert and how much better it is.



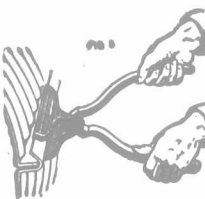
You put Pedlar's Perfect Corrugated Culvert up like this—right at the job



after teaming it there in handy bundles like this—



which fit into each other like this—



and are clamped in a three-flange stiff joint with a tool like this. Isn't that quick and easy? It is. There is no other way so good. Get Book.

PEDLAR'S PERFECT CORRUGATED CULVERT

YOUR own farm ought to have this culvert at every open drain. Useful for drains, feed chutes, stable ventilation shafts, barn bridges on sidehills. Strong enough for holding up traction engines. Remember it is easy to use, stands frost and ice, never corrodes, being made from non-corrosive Toncan metal, takes only a short time to put in place. Get the free sample and book. Learn how to use it on your farm. SEND NOW A SAMPLE OF THE CULVERT IN STRONG, NON-CORRODING GALVANIZED METAL WILL SHOW THE WHOLE STORY AND THE BOOK WILL HELP. WHY NOT LEARN ALL ABOUT IT NOW?



Established 1861. 413 CALGARY Room 7, Crown Block. ST. JOHN, N.B. 42-46 Prince William St. PORT ARTHUR 45 Cumberland St.

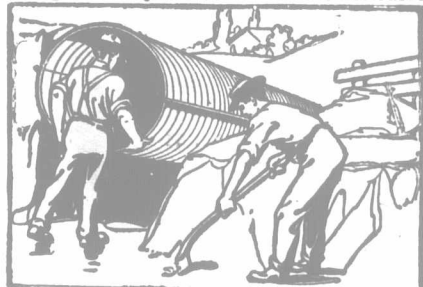
The Why and How of this Wonderful Culvert

PEDLAR'S Perfect Corrugated Culvert is in very heavy and thick, strong metal, galvanized after being deeply corrugated. Unlike wood, it never rots. Unlike brick or concrete, frost and ice cannot burst it. A single man can make it up, clamp the wide, flat flanges tightly, and roll it into place. Not a useless shovelful of earth has to be lifted, as in every other kind of culvert, and Pedlar's Perfect Culvert is so strong it can hold up a traction engine on the ground itself. You save teaming, because the nested sections are compact. Washouts are impossible. Once you use it, you have no more culvert trouble.



See what a neat bridge it makes across the highway ditch at your gate. Placed in half a day. Remember you can make any length culvert from sections of Pedlar's Nestable Culvert.

Below are two men doing statute labor. They are just setting a section of built-up Pedlar Culvert in place. See how little excavation is needed—hardly any. This means quick, easy work. This culvert will stand the heaviest loads and the hardest freshets without washing out. It comes from 8-inch sizes up. You build any length you need right at the job. Use Pedlar Perfect Culvert.



See How Easy it is to Use Pedlar Culvert. Get Book and Sample Free To-day

OTTAWA 423 Sussex St. WINNIPEG 76 Lombard St. QUEBEC 127 Rue du Pont REGINA EDMONTON 563 Third St. W. 434 Kingston St. CHATHAM 200 King St. W. LONDON 86 King St. VANCOUVER 108 Alexander St. TORONTO 111-113 Bay St. MONTREAL 321-3 Craig St. HALIFAX 16 Prince St.



THIS BOOK READ IN FEBRUARY MEANS PROFITS IN SEPTEMBER.

Vanco Spray Chemicals and Fertilizers.

Vanco Lead Arsenate will destroy all leaf-eating insects—never burns—sticks longer. The largest order ever placed for Spray Chemicals by any Canadian Fruit Growing Co., was for 'Vanco' Lead Arsenate. Vanco Lime Sulphur Solution is strong, uniform, clear, efficient—the strongest perfect solution that can be made. Government Bulletin proves this. Specific Gravity on every barrel, to protect you. Fertilizers Muriate of Potash—Sulphate of Potash—Acid Phosphate—Nitrate of Soda. We are the only house in Canada selling only straight chemical fertilizers—analysis guaranteed.

BUY WHERE YOU CAN BUY EVERYTHING AND SAVE FREIGHT. SEND FOR THE 'VANCO' BOOK NOW—study it at your leisure, and spray for future profits. CHEMICAL LABORATORIES, LIMITED, Van Horne Street, TORONTO-32

GOSSIP.

Two notable recent sales of prominent Ontario stock farms reported are those of J. & W. Russell, of Richmond Hill, and Oswald Sorby, of Guelph, the former to the City of Toronto for an Industrial farm, the latter to Ralph Ballagh, Port Huron, Ont., a former Bruce County man. The Russell farm of 380 acres, situated some fifteen miles north of Toronto, with the Metropolitan Electric Railway running in front of it, and the

Canadian Northern Railway running through it, with a siding switch privilege on the farm, was sold for the handsome price of \$60,000. The Sorby farm, which contains 355 acres, and is furnished with first-class buildings, is reported sold for \$30,000. The owners of both these properties had made themselves famous as breeders and importers of pure-bred stock, the Russells handling Shorthorn cattle as a specialty, and Mr. Sorby Clydesdale horses, of which he

imported and sold a large number of the very best class. It is understood that both the Messrs. Russell and Mr. Sorby are retiring from business, and will hold clearing sales in the near future.

Wife (complainingly)—You're not like Mr. Knagg. They've been married 20 years, and Mrs. Knagg says her husband is so tender.

Husband—Tender? Well, he ought to be, after being in hot water that long.



Clean Basins & Sinks

may be had easily, quickly and continually by the use of

Old Dutch Cleanser

The safest, most efficient cleanser for everything about the house, barn and dairy. No dirt, grease or grime can withstand its wonderful action. The thick scum which often gathers on the sides and bottom of the sink and defies soap and soap cleaning, disappears like magic when Old Dutch Cleanser is used.

Avoid Caustics and Acids

Many other uses and Full Directions on Large Sifter-can 10¢

GRAND TRUNK RAILWAY SYSTEM
Canada's Double Track Line

Winter Resorts

Round Trip Tickets now on sale to all principal Winter Resorts, including CALIFORNIA MEXICO FLORIDA, Etc.

The Attractive Route to **Western Canada** is via Chicago

Steamship Tickets on Sale by All Lines
Full information from GRAND TRUNK AGENTS

Mrs. Gramercy—It's awful to have a jealous husband!
Mrs. Park—But it's worse, dear, to have one who isn't jealous.

QUESTIONS AND ANSWERS
Miscellaneous.

LINIMENT—WORMS.

1. Would it be safe to use the liniment (the recipe of which you gave in the December 14th number of "The Farmer's Advocate") on a joint for an enlargement on a horse's leg, the result of a kick?

2. What will I feed a pregnant mare for worms?
G. R. P.

Ans.—1. The liniment, the recipe for which was given in our December 14th issue, on page 2089, in reply to G. S., would be safe enough, but a cure on a joint injury would be more difficult to effect than one situated on the bone.

2. Take 1½ ounces each of sulphate of iron, sulphate of copper and tartar emetic, and 1 ounce of calomel; mix, and divide into 12 powders. Give a powder every night and morning in damp food or mixed with ¼ pint of cold water as a drench. After the last powder has been given, feed only on bran for 8 or 10 hours, and then give 1½ pints raw linseed oil; feed only bran for 24 hours longer, and water often in small quantities.

SEEDING ALFALFA.

1. What is the present King's surname (of England)?

2. Have a high field which faces the north I would like to grow alfalfa upon, and, as I have sown red clover upon it at least twice and failed to get a catch, was thinking of sowing to peas and buckwheat next spring, plowing under as quickly as the crop was far enough advanced, and in a couple of weeks seeding with alfalfa without a nurse crop. Would this method be likely to prove a success (the field being clay), or would the fermentation of the green crop prove disastrous to the alfalfa seed, and would it be better to cultivate as a bare summer-fallow till July 1st, and then sow the alfalfa?
A. A. L.

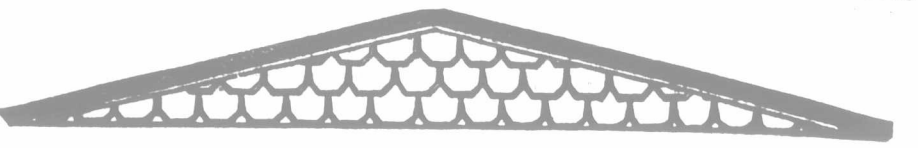
Ans.—1. Guelph.
2. The fermentation of the green crop might possibly induce an acid condition of the soil that would be detrimental to the nodule-forming bacteria, and, therefore, to the growth of the alfalfa. We should rather prefer bare fallowing, though you might well experiment with green manuring on a small area. From thorough fallowing, we should anticipate satisfactory results.

SHOE BOIL.

It is with pleasure I add my testimony to the valuable help received through reading "The Farmer's Advocate," and should be glad if you would grant me the following favor:

I have a mare with a very bad shoe boil. She has had it a very long time, so I understand, and the man in charge of the farm before me had it cut, and it has got worse ever since. She is 25 years old; does not work, but having been a good mare, my master and his family are very fond of her, and do not like the idea of doing away with her if anything can be done. White matter is running from it all the time, and the place is now open quite the size of a saucer. If possible, I would try to do something with it.
A. M.

Ans.—We published an answer given to inquiry re "Shoe Boil" in "The Farmer's Advocate," issue of August 11th, page 1336. A shoe boil is caused by the elbow coming in contact with the heels of the shoe, which, if the shoe has to be removed, either by the farrier or the owner, go without shoes, or by wearing a pad on the heel each time the shoe is on the hoof. See that the pad is made of a soft material, the wound clean by washing with warm water. Apply a liberal amount of the acid, 1 to 50, or ordinary white wash. Give her a purgative, 1 lb. of castor oil, and keep quiet. Poulticing might do some comforting healing.



How "Eastlake" Steel Shingles will save you money

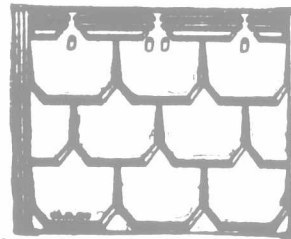


Talk No. 5

Exclusive Features

By **The Philosopher of Metal Town**

"EASTLAKE" STEEL SHINGLES



Mr. Farmer, I suppose you know of the big experimental farm at Guelph, Ontario.

Here, the farm buildings have "Eastlake" roofs.

Some of these buildings were roofed 18 years ago—all are in perfect condition to-day.

A pretty stiff durability test, don't you think?

It's the "Eastlake" exclusive features that count.

The single side-lock and gutter, the "Eastlake" counter-sunk cleat and the three-inch lap.

The "Eastlake" single side-lock makes it the easiest and quickest to lay and permanently weathertight.

No rain or snow, no matter how fine, can sift in under an "Eastlake" Steel Shingle. There is a full three-inch lap and the counter-sunk cleat holds the bottom of the shingle as tight as though welded in place.

The bold "Eastlake" Pattern is so deeply embossed that only the very best material will hold it.

Let us send you our illustrated booklet, "Eastlake Metallic Shingles." Write to-day—just your name and address on a post-card.

We also manufacture Corrugated Iron, House and Barn Siding, Metallic Ceilings, Eave-trough, Conductor Pipe, Ventilators, etc.

The Metallic Roofing Co.
LIMITED

Toronto - Winnipeg A64

Johnson Says:

Let 325,000 Satisfied Customers Be Your Guide in Choosing an Incubator

WHY experiment with an unknown machine when 325,000 satisfied customers swear by the Old Trusty? Why take chances—why pay two prices? Johnson sends your money back if the Old Trusty doesn't make good every time with less trouble—less work—less watching—and 75 per cent better hatches. Anyway—

Send for Johnson's Big FREE BOOK

Johnson wrote his book for 1912 after his experience in making and selling 325,000 Old Trusties. It's not like any other incubator catalog—couldn't be—because no one else has the same experience. In it he shows over 300 actual photographs taken from the thousands sent him by enthusiastic users of his first machine for his own use until he shipped the last of the 325,000. Read the proof in the description: Triple-cased throughout—inner case of high grade ¾-inch powder dry California redwood—middle case of highest grade asbestos—fireproof insulation—outer case, legs and all, of galvanized metal—handsome mottled finish—equipped with guaranteed-not-to-leak cold-rolled copper tank and heater—indestructible—can't burn—can't warp, swell or open at the seams—crack or decay—guaranteed ten years—twenty if you say so—shipped complete with best thermometer, egg tester trays, and instructions—ready to run with sure results by anybody—no trouble, worry, or experimenting. Safety lamp and regulator fitted on all sides—top clear for use as table in egg testing.



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Over 325,000 in Use

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Why not send your name today? Mail a postal and it will only take a day or so for you to get Johnson's Big Book and be on the safe side. Address: **M. M. JOHNSON, The Incubator Man** Clay Center, Nebraska

QUESTIONS AND ANSWERS.
Miscellaneous.

MARE IN POOR CONDITION.

I have a mare which will be four years old in May. We do not find anything wrong with her mouth. We worked her since she was three years old, but did not work her much this winter. She is very poor and gaunt; her hair is long and very dry; she does not feed very well now; is in a comfortable stable, and has plenty of exercise. M. C.

Ans.—Have her mouth examined again. In many cases, at this age, the molar crowns of the first two molars in each row have not shed, and should be removed with a forceps. Then give a desertspoonful of the following, three times daily, viz.: Equal parts sulphate of iron, gentian, ginger, and nux vomica.

RINGBONE.

Horse about eighteen years old, about a week ago was taken very lame in right front foot. It is so sore he refuses to step on it. At first it was very difficult to locate the lameness. Horse stands with ankle and knee bent forward; ankle was slightly swollen with some heat. Now there is quite an enlargement on outside of the foot, where the hair and hoof join. This enlargement is about as thick as a man's finger, and extends from the heel nearly to the center in front of hoof. This swelling bulges out over top of hoof. Would you think it ringbone and gravel in the foot? Kindly advise in next issue what you think, and how to treat.

CONSTANT READER.

Ans.—The symptoms indicate a severe case of ringbone, which is very hard to treat, especially in an aged animal. There are three methods of treating, viz.: blistering, firing and neurotomy (removal of the nerves supplying the limb in the region of the ringbone). Would advise that you get your veterinarian to fire and blister, and, if necessary, repeat the operation in a year. If this fails, neurotomy may be resorted to. This latter operation cures the lameness by removing the sensation, but does not cure the disease, and should only be performed where other measures have failed.

BEGINNING WITH POULTRY.

1. I am just starting in the poultry business, and thought I would ask you a few questions concerning the selection of pure-bred cockerels. The breeds which I am going into are Buff Rocks, White Wyandottes, and Hamburgs. Please tell me the points of their breeding.

2. Could you inform me where I could get a Silver-spangled Hamburg cockerel? E. W. S.

Ans.—1. Would suggest that you start on a small scale, and gradually increase your flock as you gain more knowledge of the business. Select your birds from a utility standpoint, being careful that they come from good-laying strains, and that they are of a good type for the breed. White Wyandottes should have a yellow beak, bright red or bay eyes, bright red face, comb, wattles, and earlobes, yellow legs, and pure white plumage. The same applies to the Buff Rocks, with the exception of plumage, which should be golden-buff, with head, neck, back, back, wing-bows and saddle richly glossed with a metallic color, and a lighter shade of under color free from all foreign colors. These two breeds are general-purpose fowl, being good winter layers, and fair table fowl. Be sure to get birds with sufficient size and constitution, the latter being denoted by a short, strong beak, and a short, wide head, with a full, bright eye, and a sprightly bearing. A Silver-spangled Hamburg cockerel should have a dark beak, dark bay eyes, bright red face, comb and wattles, white earlobes, and white head plumage, leaden-blue shanks and toes, and clear, silvery-white plumage, with a black spangle proportionate to the size of the feathers, the under color being dark slate.

2. Dealers of these fowl should advise you in "The Farmer's Advocate."

Get at it



with
the Scales!

Don't guess at your crops. Get at them with the scales as this man did, and see how our fertilizers pay you good dividends.

"I will write you my experience with Homestead Fertilizer on Oats. The yield was 70 bushels per acre of oats that weigh 40 pounds to the bushel, struck measure, on land I call very much run down.

There were 12 acres in the field. It was in beans last year and the ground was fall-plowed late for oats, and was well fitted in the spring with a spring tooth harrow and the oats drilled in at 2½ bushels to the acre.

I commenced on one side of the field by drilling 100 pounds of Fertilizer to the acre. I increased the Fertilizer at intervals at the rate of 50 pounds each time until I got up to 400 pounds per acre, leaving a drill row at each increase unfertilized. The parts that were fertilized with 100 pounds and 150 pounds each per acre were not as good as that which was fertilized with 200 pounds and over. The unfertilized strips were sorrowful looking oats by the side of the rest and attracted a great deal of attention. These strips were examined by good judges who laid their yield at from 30 to 40 bushels per acre—the yield of the whole field had no Fertilizer been used. That being the case, from 30 to 35 bushels per acre were added by using the

HOMESTEAD FERTILIZER

We pulled up equal distances of rows that grew only seven inches apart, side by side, and took the dirt from the roots and weighed them and found that the fertilized row weighed over two and a half times as much as the unfertilized row. The fertilized oats stood a foot higher than the others and were much stiffer and larger, with over three times as much root as the other.

It pays well to use Fertilizer. It will add 20 to 40 bushels per acre, besides giving you double the straw and ripening your crops from a week to ten days earlier." (Name given on application.)

Our soils in Ontario will produce good crops if the farmer goes at it in the right way. There is no chance to make any money at all out of a poor crop.

Some Fertilizers are better than others. That is a well known fact. There are farmers who are satisfied with ordinary crops grown with inferior Fertilizers, because they have never used the best. While the farmer is obliged to take some chances on things beyond his control, he should not take any chances as to the Fertilizer he applies, for that is something he can control.

HOMESTEAD FERTILIZERS

are made not only to contain the full percentage of plant food according to guaranteed analysis, but—we go further than that. The agricultural value of our Fertilizers is given first consideration, because we look to the future. We want every farmer who uses our Fertilizer to get good results and increase his orders each season. That is why we are doing a tremendous business. Our factories never shut down.

It is a simple matter to apply our Fertilizer, because it is finely ground. You can sow it with a grain drill before planting. But, if you have no drill, scatter the fertilizer by hand from the wagon and go over the field with a harrow.

Write for further information and agency proposition.

Every farmer should read an article by John A. Widtsøe, Ph. D., printed in our pamphlet—How to fight drought with fertility and why the richness of soil makes up for lack of moisture.

The American Agricultural Chemical Company,
MICHIGAN CARBON WORKS, DETROIT, MICH.

Largest manufacturers of high grade fertilizers in the world.

When Writing Please Mention The Advocate.

GOULDS RELIABLE SPRAYERS

**You've
Got to Spray if
You Want Good
Fruit**

You can do thorough spraying only with the most efficient pump and outfit. No other kind of spraying is worth while—no other spray pump is worth bothering with. That's why you should buy a Goulds Reliable Sprayer.

Goulds Sprayers are, first, designed to meet spraying conditions most efficiently; then, built of the proper materials to give long service and resist the action of spray chemicals. Made in all types, for hand and power. Don't buy a spray pump because the first cost is low. A Goulds Sprayer will prove the most economical you can buy. Send for our booklet—

**"How to Spray—
When to Spray—
Which Sprayer to Use."**

The numerous and authentic spray formulas it contains make it of the greatest value to every crop grower.

The Goulds Mfg. Co.
The Largest Manufacturers of Pumps for Every Service.
**128 W. Fall Street
Seneca Falls, N.Y.**
St. Catharines Cold Storage & Forwarding Co., Ltd., St. Catharines, Ont.
Agents for Goulds Sprayers



When the medical authorities unite and say that the **Dysthe Face Protector** gives excellent satisfaction, they mean what they say. You can look straight into a storm with comfort; keeps the eyes, ears and nose well covered. Dr. I. P. Brasted, Oakes, N.D., says: "He would sooner go in a blizzard without socks than go without my face protector. Hundreds of testimonials. Everyone more than pleased. Write for one today."

Price - \$1.00

Send name and address for catalogue. Agents wanted.

MARTINIUS DYSTHE
Winnipeg, Canada

**Government
STANDARD SEEDS**
FOR SALE—ALL HOME-GROWN
Alfalfa, \$11.00; Red Clover, \$14.00; Alsike, \$11.00; Timothy, \$9.00; O. A. C. No. 21 Barley, \$1.10; peas, \$1.40; v. ts, several kinds, 60 lbs. per extra; Cotton, 25c; Jute, 8c. Seeds guaranteed to satisfy you on a rival. Ask for samples.
CALEDONIA MILLING COMPANY, LTD.
Caledonia, Ontario

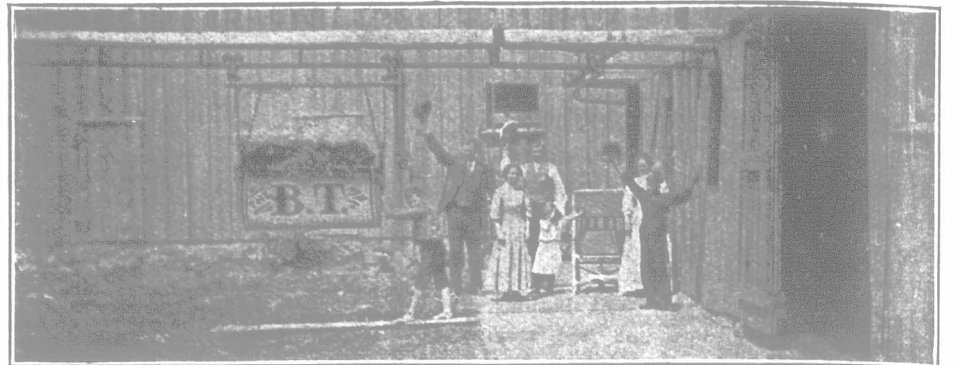
GOSSIP.

A NEW LOT OF CLYDESDALES.
Barber Bros., of Gatineau Point, Quebec, just across the river from Ottawa, have lately landed their 1912 importation of Clydesdale stallions and fillies. There is no other firm in Canada in the business of importing Clydesdales that pays more attention to the true characteristics of a draft horse, namely, big size, heavy, even muscling, strength and quality of bone, nicely sprung pasterns, and big, wide feet, than do the Barber Bros. And every one of this lot is a genuine type of a draft horse that will sire big money-making geldings and mares. Of this lot, says the Scottish Farmer, "No better lot of horses have left Scotland for many a day." Following is a synopsis of the breeding of several of them: Allanhill, brown, rising four years, is by the renowned breeding horse Abbey Fashion, and dam by the H. & A. S. first-prize horse, Gallant Poteath. When fully grown, this colt will go considerably over the ton. He is a toppy, stylish horse, of superb draft character. Mikado is another brown, rising four years, a big, faultless draft horse, sired by the great Baron Ruby, dam by that noted sire of show things, Sylvander, grandam by Baron's Pride. This is the breeding that tells in the progeny. Another rising four years, is the bay, Lynwood Mac, whose breeding, coupled with the perfection in type and quality of underpinning, make him one of the most desirable breeding horses in Canada, sired by the Aberdeen prize horse, Horatius, dam by the world-renowned breeding horse and four-times Cawdor Cup champion, Prince of Carruchan, grandam by the only Macgregor, Sorbie Medallist is a brown, rising three years, a right nice, big colt, sired by the Royal champion, Diploma, dam by the noted prizewinner, Exquisite, grandam by the great sire, Prince Edward. Sir Greville is a bay, rising three, an exceptionally smooth and full-muscled colt that stands on a faultless set of underpinning. This, we think, is one of the great colts in Canada, sired by Sir Victor, dam by the noted show horse, Prince Gallant, grandam by the Glasgow first-prize horse, Orlando, and great-grandam by the great Top Gallant. Laird of Hopetown is a big, rangy, brown yearling, one of the coming good ones that will go over the ton, with ideal character, and the best of bone, sired by the H. & A. S. and Edinburgh first-prize horse, Baron Hopetown, dam by the H. & A. S. champion, King of the Roses, grandam by the Glasgow first-prize horse, Duke of Rothesay, illustrious breeding, and a right good colt. Those mentioned show the superior breeding and individuality of the entire shipment, the fillies being equally as high-standard.

TRADE TOPIC.

FATTENING STEERS AT BIGGER PROFIT.—The object of every farmer fattening steers is to get them on the market at the earliest date in prime condition. It is well known that a certain amount of a steer's ration is wasted by the animal failing to digest and assimilate it. Dr. Hess, of Ashland, Ohio, in studying the cause of this waste, arrived at the conclusion that it is poor digestion. Experiments conducted by him on his own stock farm, led him to believe that certain bitter tonics, when added to the ration, would stimulate the steer's digestive organs, and thus reduce the ration waste. A demand arose for these tonics, and Dr. Hess placed them on the market. Dr. Hess' Stock Tonic is not a ration or a substitute for a ration, but when added to the ration, is claimed to act on the digestive organs, and thereby help the animal to convert more food into meat, fat and milk. Two tablespoonfuls to a steer's ration twice per day is sufficient, so its use is economical. Write Dr. Hess & Clark, Ashland, Ohio, for their free book, entitled, "Feeds and Feeding."

Just met Mrs. Grady. She is back from Nevada, where she has been for about a year. "Interesting?" "Yes, very interesting."



IT'S PLAY WITH A BT Litter Carrier

If you are using a plank and a wheelbarrow as the means of carrying the stable manure to the pile, the picture above shows you how you **might** do it.

Isn't it easy? A boy can do it with a BT Litter Carrier and never **turn a hair**. He'll make a quicker, cleaner job of it, too. Four big barrow loads every time.

IT'S DONE BETTER

It's done better with a BT Litter Carrier, because there is a big wide-mouthed bucket lowered right down to the floor, into which you throw the manure. It is water-tight. With a wheelbarrow some of the refuse falls off while you are loading, and some more falls off on the trip to the pile. **You can't help it!** The cost is not large. Fill out the coupon.

WHERE IT PAYS

The boy doing the work of a man, or two men, saves money. Improved cleanliness of the yard means better conditions all around. You get the manure well away from the barn, so that it is not rotting out the sides and sills of the barn and injuring the health of the animals with the ammonia fumes constantly pouring off the manure pile. Our catalogue will interest you.

Beatty Bros.
Fergus, Ontario
We also make Hay Carriers and Cow Stanchions

BEATTY BROS., 1019 Fergus, Ont.

Kindly send me free your book on Litter Carriers and prices.

I will need about _____ ft. of track.

And expect to put in a litter carrier about _____

Do you need a hay track? _____

Name _____

Post Office _____

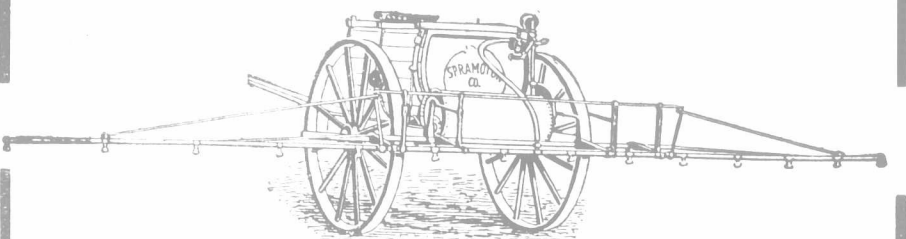
Province _____

IF YOU are at all interested in Home-Mixed Fertilizers

I would like to send you my book on the subject. It contains full information, formulas and lots of information to farmers who want to get the most and the best for their money. The book will be sent free upon request by post card from you.

Dr. WM. S. MYERS, Director of Propaganda
17 MADISON AVENUE, NEW YORK
No Branch Offices

THE PEST PARALYZER



The Horse-Power SPRAMOTOR shown above will thoroughly spray two acres of potatoes or row crops in 20 minutes. The horse does all the work. Twelve nozzles that will not clog spray both tops and vines with 125 pound pressure, get after the parasites. Full control from driver's seat. Has automatic regulator and agitator, nozzle protector, pressure relief, 12-gal. air pressure tank, drag, air and controlling cocks. Equally efficient on row crops or orchards. Made for 1 or 2 horses or hand. Awarded gold medals at National Horticultural Congress. Write for free literature on crop diseases. **AGENTS WANTED.**

SPRAMOTOR, LIMITED, 1359 King Street, LONDON, CAN.

GOSSIP.

As advertised in this issue, E. F. Osler, of Bronte, a station half-way between Toronto and Hamilton, Ont., will hold a sale of high-class registered Holstein cattle and Clydesdale mares, on March 25th, further notice of which may be looked for in these columns later.

ORMSBY GRANGE, THE NOTED CLYDESDALE CENTER.

Ormsby Grange, the beautiful home of Dr. D. McEachran, (late Chief Veterinary Inspector for Canada), has, in the short space of five years, become recognized as the great Clydesdale center of the Province of Quebec, and second to none other in the whole of Canada. Situated near the town of Ormstown, about fifty miles south of Montreal, in one of the most prosperous agricultural districts of Quebec, Ormsby Grange Stock Farm of five years ago, and Ormsby Grange Stock Farm of to-day, would not be recognized by any of its former owners. Under the expert direction of the present owner the transformation has been radical and complete. To-day, modern wire fences have replaced the unsightly rail fences of former years, up-to-date sanitary farm buildings stand where once stood the pioneer buildings that in their time did good service. The stables of today are large, roomy, well lighted and well ventilated, cement and iron being principally used in their construction, the whole fitted with a complete system of electric lighting, the power being generated from dynamos run by a gasoline engine, which also supplies power for the cutting and crushing machinery. And still the work of improvement goes on, the Doctor being continually devising ways and means for the safety and comfort of the stock, and economy in time and labor in their care. An idea, which, so far as we have been able to ascertain, is one of the Doctor's origin, and which struck us as being of incalculable value to every farmer in the country did he but put forth a little energy to carry it out, was a well-drawn chart, or plan, of the farm, in which every field and paddock, together with the buildings, was drawn. The principal object the Doctor had in view was to ascertain at a glance what crop was grown on any field the previous year, the yield of each field, the amount of manure used, etc. By this simple plan, a perfect system of rotation can be carried out, and any deficiency in the producing power of any particular field or part thereof can be known and the proper remedy applied. This winter, outside of the Clydesdale end of the business, the Doctor is busy with steer feeding, about forty being fed, part of them loose and part of them tied. They are fed on scientifically-balanced rations, carefully weighed, the result of which the Doctor will make known through these columns later. Dr. McEachran is one of the most extensive importers of Clydesdale horses in the Dominion, his life's experience particularly fitting him for the work. He has already made several large importations, which, owing to their high-class quality and breeding, have found ready sale. In his stables at the present time are a number of mares and fillies, from foals up, but principally the brood mares used in the farm operations, the big demand of the last few months having left the stock on hand pretty low. Several of the foals are the get of the principal stallion in service, Imp. Selburne, a horse of magnificent type, style and quality, and acknowledged by all who have seen him as one of the best Clydesdales ever imported. As an example of the high-class character of breeding selected by the Doctor in Scotland, we have only to mention an exceptionally big, choice yearling son of the great Royal and Highland winner, Silver Cup, his dam by the H. & A. S. champion, Rosedale, and granddam by the H. & A. S. first-prize horse, Sanquhar. This is one of the great colts landed in Canada in recent years. In the early spring months the Doctor intends to sail for the land of his birth for another and larger importation, which will be personally selected, particulars of which will appear in these columns on arrival.

Are Your Hens Showing a Profit?

Unless every one of your hens is laying from 150 to 175 eggs a year, it's a sure sign that they are not digesting as much of their ration as they *should* and *can*, and it's a surer sign that you're not making any profit out of them. Stop the rule-of-thumb method and try "the Dr. Hess Idea" of feeding poultry, which is based on the sound principle that a poor ration thoroughly digested is far better and more profitable than the best ration poorly digested.

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is a scientifically prepared poultry tonic that makes hens lay by helping them convert more food into eggs by increased digestion. It makes the egg clusters more responsive. Dr. Hess Poultry Pan-a-ce-a, on this same digestive principle, makes plump, heavy poultry for market and tides young chicks over to healthy maturity. Cures Gapes, Cholera, Roup. The cost of this tonic is trifling—a penny's worth is ample for thirty fowls per day. Read this liberal, protective guarantee.

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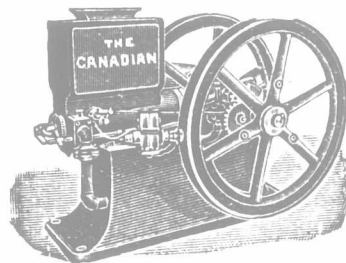
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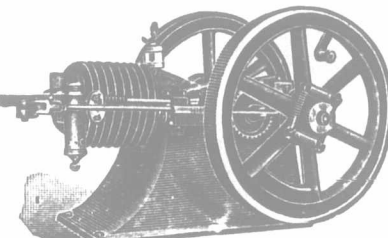
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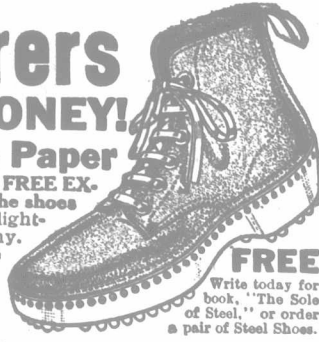
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One pair outlasts 3 to 6 pairs best all-leather work shoes. They are stronger, lighter, better, more comfortable and economical than leather shoes. They absolutely do away with corns, callouses, bunions and swelling of the feet! Give splendid protection against coughs, colds, rheumatism, sciatica, etc., by keeping the feet bone-dry in spite of mud, splash or water. Uppers are of finest quality pliable

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waterproof leather, joined to the steel by non-rusting metal rivets, making water-tight seam.

Hair Cushion Insoles and springy soles make Steel Shoes so easy, warm, dry and comfortable that you will not be troubled with corns, callouses and blisters or suffer from colds and rheumatism.

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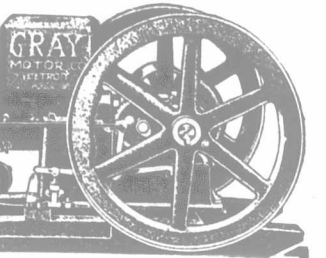
Save buying several pairs of boys' shoes a year. One pair of Steel Shoes will do it.

00661P.

The Mount Victoria Stock Farm at Hudson Heights, Quebec, is again to the front with a choice collection of Clydesdale and Hackney horses. Although the manager, E. Watson, reports a big trade during the past year, there are still in the well-appointed stables a number of both Clydesdales and Hackneys of a quality that would make the heart of a horse-lover glad. Owned by T. B. McCauley, of Montreal, who has spared no expense in the building and arranging of the farm appointments, Mount Victoria Farm will compare with any of the high-class and elaborately-equipped stock farms in Canada, and the same high ideals are practiced in the selection of the animals imported and handled there.

At the head of the Clydesdale stud is that great horse and renowned sire, Imp. Netherlea [8324], the brown 2,108-lb. son of the H. & A. S. first-prize winner, Pride of Blacon, dam by the world-famous Sir Everard, and grandam by the H. & A. S. first-prize winner, Prince Lawrence, and great-grandam by the H. & A. S. second prize, Springhill Darnley. He is a horse of superb character, and one of the few famous sires. Assisting him in service is his 2,040-lb. son, Lord Aberdeen [8495] (13930), dam by Kippendavie Stamp, and grandam by Knight Errant. Bred on prizewinning lines, Lord Aberdeen has won many prizes, including championships, combining to a marked degree big size, with superb quality. He is a great show horse, and a markedly successful sire. Prominent among the mares and fillies is the bay four-year-old, Bessie Jane (imp.), sired by Flash Sturdy, and dam by Aerial Prince. She is a big, flashy mare, in foal to Netherlea. Another of the extra good ones is the 1,700-lb. Sylphland Princess (imp.), a seven-year-old daughter of the immortal Baron's Pride, and dam by Macgregor. She is in foal to Lord Aberdeen, and is most desirable buying for anyone wanting a choice brood mare. If any one thing more than another has contributed to the fame of this noted farm, it is the high-class quality of the Hackneys. At the head of the stud is the several-times winner at the London Hackney Show, Imp. Christopher North, a son of the great Polonius, dam by the famous Danegelt, and grandam by the no less famous Wildfire. He is a horse of superb type and sensational all-around action. Silver King is a chestnut two-year-old son of the great prizewinner, Terrington Lucifer (imp.), one of the greatest sons of the renowned Copper King, dam the unbeaten Imp. Cymbal, by the champion Mathias. This colt has never been beaten in his many contests at leading shows, his action is faultless, and his conformation perfect. He has to his credit championship at the Dominion Exhibition, at St. John, N. B. Among the many high-class mares and fillies are the unbeaten Cymbal (imp.); the Ottawa champion, Ophelia's Heiress (imp.), by Polonius, and the Ottawa second-prize two-year-old, Royal Ophelia (imp.), by Royal Ophelian. Those mentioned, together with several others of equally high standard, make up an aggregation of Hackneys seldom duplicated in this country.

All Sizes from 1 1/2 to 36 H.P.



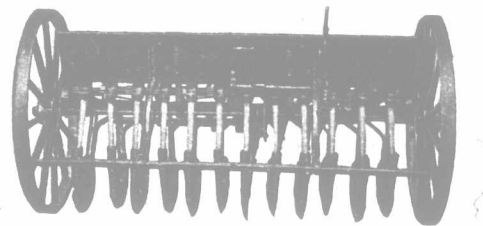
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Of the New York S. & C Hospital. This school is prepared to receive a limited number of pupils for training in general, medical, surgical, obstetrical, orthopedic and dermatological nursing. Course two and one-half years. Remuneration, \$54. Applicants must be between the ages of 21 and 25 years, and have had eight years' grammar grade and one year high school instruction, or its equivalent. Apply to SUPERINTENDENT, at 301 East 19th St. New York N. Y.

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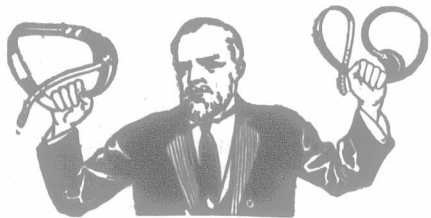
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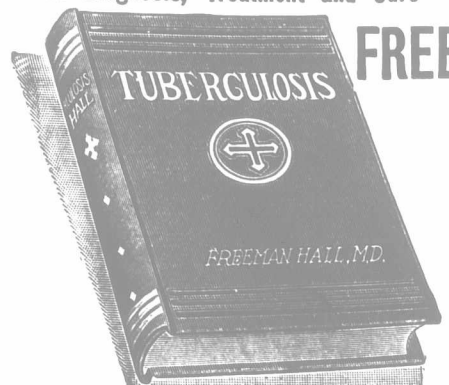
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CATARRH SNUFF**
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**QUESTIONS AND ANSWERS.
Veterinary.**

GOITRE.

Bull terrier pup four months old has a large neck. Is it contagious, and will it cause the pup to go mad?

J. G. E.

Ans.—This is due to enlarged thyroid glands, and is called goitre. It is not contagious, neither will it cause rabies. Get an ointment made of 1 dram each of iodine and iodide of potassium, mixed with 1 ounce vaseline. Rub a little of this well in once daily.

Miscellaneous

DUTY ON EGGS.

Can you inform me what the duty on eggs from the United States into Canada will be?

S. A.

Ans.—Three cents per dozen.

MISCELLANEOUS.

1. Give address of Mr. Burrell, Minister of Agriculture.
 2. To whom should I write for information on underdraining?
 3. Have a field pastured for several years. In spots there is no grass. Is there anything you could recommend to sow on it without plowing, to make pasture for next summer?
 4. What is the best oats and barley to sow for mixed grain, and in what proportion?
 5. Which is the cheaper to buy for dairy cows, oil cake at \$2.25, or cotton seed at \$1.90 per cwt.?
- Ans.—1. Hon. Martin Burrell, Minister of Agriculture, Ottawa, Ont.
2. Prof. Wm. H. Day, O.A.C., Guelph, Ont.
3. Why are these spots bare? Is the land sour or otherwise ill-conditioned? If not, you might disk up the spots and sow Prof. Zavitz's mixture of 51 pounds oats, 30 pounds Early Amber sugar cane, and 7 pounds Red clover. If the patches are too small and scattering to work, you might simply sow red clover, alsike and orchard grass, and harrow in.
4. Daubeney oats and Mandcheuri barley, one bushel of each per acre.
5. In limited quantities, the cotton-seed meal, if of high grade, is the more economical for mature cattle, but is poison for hogs, and not the best for calves. Oil cake is a safer feed.

DOUBTS CONCERNING SILAGE.

I observe with pleasure that you are not averse to present both sides of a question in your magazine. I would like to hear what the "Other Side" have to say about silos and silage. Although silage has always been highly recommended by the farm papers and station bulletins, I would like to get your answer to the following questions:

1. Does corn silage injure the teeth of cattle?
 2. Do cattle, fed on silage during the winter, "go back" when put on grass; or, at any rate, do less well than though fed dry feed?
 3. Does silage injure the digestion of cattle? I have heard many say it does?
 4. Is a milk cow's period of utility materially lessened by feeding silage?
 5. What difference is there in the nutritive ratio between cured corn and corn silage?
- Ans.—1. Possibly, to a slight extent, but the effect of good silage is so slight as to be practically negligible.
2. Our experience is that cattle going from silage to grass are less affected by the change than those going from dry feed to grass. The change is not so radical, and the usual spring scouring is therefore less pronounced.
3. Good silage, fed in reasonable quantities, does not, at least, not materially. Not long ago, George Rice reported in these columns that the famous Holstein cow, Calamity Jane, had lived to the age of eighteen years, or thereabouts, eating silage. If we mistake not, every year of her life. It certainly could not have been a very quick poison in her case.
4. No.
5. Not much. So far as the RATIO is concerned, the cured fodder may have a slight advantage, but in total feeding value, the silage is ahead. An acre of silage will make more milk or beef than an acre of cured corn, under ordinary conditions, at any rate.

LIVINGSTON'S Oil Cake and Meal are guaranteed absolutely pure. They are made by the Old Patent Process—and will keep as long as you like.

Careful tests have proved them to be the most easy-to-digest of all cattle feeds—95% goes to build muscle, tissue and health.

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Supplied in three grindings—Fine Ground, Pea Size and Nutted.

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50 Registered Percherons, Wed., Feb. 28, 1912

At both these sales we will offer animals, both imported and Canadian bred, of all ages from yearlings up, in Stallions, Fillies, Mares, and mares in foal, consigned by some of the best known breeders. It has been demonstrated that there is big money in heavy draft horses.

THIS IS THE BREEDER'S CHANCE
Prepare to attend Canada's great Heavy Horse Sale.

Make a note of the date in case you lose this paper. Entry books for the above sales close February 15th, 1912. J. Herbert Smith, Man.

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We have for service this season the Champion Imp. Clydesdale stallions Netherlea, by Pride of Bacon, dam by Sir Everard; also Lord Aberdeen, by Netherlea, and the Champion Hackney stallion Terrington Lucifer, by Copper King. For terms and rates apply to the manager. T. B. MACAULAY, Prop. ED. WATSON Manager.

IMP. CLYDESDALE STALLIONS AND FILLIES
In my late importation of Clydesdale stallions and fillies I have exceptionally choice breeding idea, draft characters; as much quality as can be got with size, and I can undersell any man in the business. Let me know your wants.
GEO. G. STEWART, Howick, Que. L.-D. 'Phone.

Clydesdales, Stallions and Fillies, Percheron Stallions
My 1911 importation have arrived—20 Clyde stallions, 18 Clyde fillies, 6 Percheron stallions. I have many winners at Old Country shows. Big, choice, quality stallions and mares, bred from the champions, and the best Percherons in Canada. Prices right.
Long-distance 'phone. T. D. ELLIOTT, Bolton, Ont.

Shire Stallions and Mares, Shorthorn Cattle (both sexes); also Hampshire Swine. Prices reasonable.
Porter Bros., Appleby, Ont., Burlington Sta. 'Phone.

Bay View Imp. Clydesdales We have got them home, 11 fillies and 7 stallions, show horses bred in the purple, big in size, and quality all over. If you want something above the average come and see us. Prices and terms the best in Canada.
On the Toronto-Sutton Radial Line. John A. Boag & Son, Que. 'Phone.


HIGH-CLASS IMPORTED CLYDESDALES
I have Clydesdale stallions and fillies for sale, every one strictly high-class in type, quality and breeding; stallions over a ton and very short of fillies of superb form and quality. If you want the best in Canada, come and see them.
JAMES TORRANCE, Markham, Ont.

Clydesdales, Imp., Just Arrived Our new importation has arrived safely, and we are now in a position to supply the trade with stallions from 1 year old up to 4, with more draft character, big, strong, flat bone, and better breeding than any other firm in the trade. Prices and terms as favorable as any other importer in Canada.
BARBER BROS., GATINEAU PT., QUEBEC, NEAR HULL

PERCHERONS AND CLYDESDALES
Full line of prizewinning stallions and mares always on hand.
HODGKINSON & TISDALE, Simcoe Lodge, BEAVERTON, ONTARIO
Long-distance 'phone.

BIG QUALITY CLYDESDALES
We have them on hand imported this year, Stallions and Fillies, many of them winners, the best blood of the breed, with size, character and quality. There are none better and no firm can sell cheaper.
R. NESS & SON, Howick, Que.

HORSE OWNERS! USE

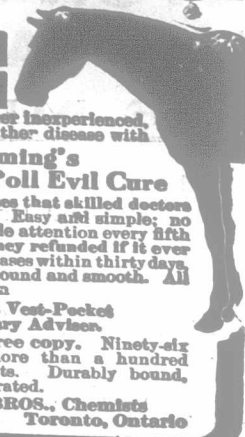


GOBBLETT'S CAUSTIC BALSAM.

A safe, speedy and positive cure. The safest, Best BLISTER used. Removes all bunches from horses. Impossible to produce scar or blemish. Send for sample jar. Special advice free.

THE LAWRENCE-WILLIAMS CO., Toronto, Ont.

fistula and Poll Evil



Any person, however inexperienced, can readily cure either disease with Fleming's

Fleming's Fistula and Poll Evil Cure

—even the old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in Fleming's Vest-Pocket Veterinary Advice.

Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durably bound, indexed and illustrated.

FLEMING BROS., Chemists
75 Church St., Toronto, Ontario

Dr. Page's English Spavin Cure

For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock. Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements.

This preparation (unlike others, acts by absorbing rather than a blister. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair.

Manufactured by Dr. Frederick A. Page & Son, 7 and 9 Yorkshire Road, London, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents:

J. A. JOHNSTON & CO., Druggists,
171 King St. E. TORONTO, ONT.

Seldom See

a big knee like this, but your horse may have a bunch or bruise on his Ankle, Hock, Stifle, Knee or Throat.

ABSORBINE

Before After will clean them off without laying the horse up. No blister, no hair gone. \$3.00 per bottle delivered. Describe your case for special instructions and look 8 E free.

ABSORBINE, J.F. Liniment for mankind. Removes Painful Swellings Enlarged Glands, Gout, Wens, Bruises, Varicose Veins, Varicosities, Old Sores, Allays Pain. Price \$1 and \$2 a bottle at druggists or delivered. Manufactured only by W.F. YOUNG, P.D.F., 258 Lyman's Bldg., Montreal, Ca.

Percheron, Belgian, Shire, Hackney Stallions and Mares

Two to four years old. Imported and American-bred. 1,800 to 2,200 lbs. Three importations last few months, others soon. Prices on most of my stallions, \$700 to \$1,200 at my barns. Special inducements to Canadian buyers

LEW. W. COCHRAN, Crawfordville, Ind

NOTICE TO HORSE IMPORTERS

GERALD POWELL

Commission Agent and Interpreter
Nogent Le Rotrou, France

will meet importers at any port in France or Belgium, and assist them to buy Percherons, Belgians, French Coach horses. All information about shipping, banking and pedigrees. Many years' experience; best references. Correspondence solicited.

Messrs. Hickmatt & Scruby

COURT LODGE, EGERTON ST., ENGLAND

EXPORTERS OF PURE

Live Stock of all Descriptions.

During the spring months we shall be shipping large numbers of Percherons, Shires, Belgians, Clydesdales, Suffolks, etc., and all those who wish to buy imported stock should write us for full particulars.

AGENTS \$36 A WEEK



Hundreds of Agents coining money. Sell worth of tools for the price of one. Demand for tools is increasing. Fast selling. Big demand for tools. Wood sold in two days. He says: "Best seller I ever saw." Get in the game. Write at once for terms and free sample to workers.

THOMAS MFG. CO., 2944 Wayne Street, DAYTON, OHIO

GOSSIP.

A BIG LOT OF IMPORTED CLYDESDALES.

The well-known firm of R. Ness & Son, Howick, Que., importers of Clydesdale, Percheron and French Coach horses, when visited by a representative of "The Farmer's Advocate" a few days ago, was found to be well stocked with an exceptionally choice selection of stallions and fillies, particularly of Clydesdales. The great stallion, Sir Spencer [9655] (imp.), was found in particularly nice bloom. One of the most noted sons of the renowned sire, Sir Hugo, Sir Spencer has won many laurels, both in Scotland and in Canada, and as a sire, three of his daughters now in the Howick stables prove him to be one of the greatest living sires this country has ever seen. At the late Ottawa Show, one of these, Darling of Begg, in the two-year-old class, was first, and afterwards champion over all ages. Another in the same class, Bess Spencer, was fourth; the other, Nan Spencer, in the three-year-old class, was first and reserve champion. This is a wonderful showing, particularly in such strong classes as there were at Ottawa. The dam of Sir Spencer was by the H. & A. S. champion, Rosedale, and he himself was champion at Ottawa and Sherbrooke last fall. Baron Squire [12522] is a bay, rising four, by the renowned Baron's Pride, dam by the great Macgregor. This is an exceptionally choice horse, with big size and superb quality. Last fall he was first at Sherbrooke and second at Ottawa. At the late Ottawa Winter Show he was again second. Royal Cup [12524] is a black, rising three, by the renowned Royal and H. & A. S. first-prize winner, Silver Cup, dam by Fickle Fashion. This is one of the great colts. He is a show colt all over, with perfection in conformation and quality. At the fall and winter Ottawa shows he was first and reserve champion. Another, same age, is the big bay, drafty, Baron Allan [12523], by Baron's Pride, dam by Fickle Fashion. He is choke full of draft character and shows strength all over. The fillies are an extra choice lot, remarkably well-bred. Besides the three before mentioned, there are four rising three years and two rising two years. The former are Lady Bowie, a black, by Earl of Clay, dam by the great Baronson, by Baron's Pride. She is thus a half-sister to the champion Oyama. Dusky Maid is a black, by the Royal champion, Diploma, dam by Up-to-Time. These two are well matched, and should go together. Bell Grierson is a brown, by the renowned Prince Sturdy, dam by Emperor of Bombie. The other, rising three, is the bay, Jeannie Cruickshank, by the noted sire Radium, dam by the H. & A. S. second-prize horse, Royal Carrick. The yearlings are Mildred of Allenfern, a brown, by Baron Ruby, dam by Prince Albert, and Lincluden Maggie, a brown, by Baron Ruby, dam by Prince of London. On hand in Percherons there are two stallions, both blacks, rising three years of age, one of them first and champion at Ottawa last fall. They are an exceptionally choice pair, particularly good at the ground. All are for sale, at right prices.

QUESTIONS AND ANSWERS.

Veterinary.

COW SWEATS IN STABLE.

Occasionally, when I go to the cow stable in the morning, I notice that one of my cows is sweating on back and sides. She is thin in flesh. L. L.

Ans.—This may be due to want of ventilation and too close atmosphere, and may be due to general want of condition. It would be well to give her a good dose of sulphate of iron, gentian, ginger and nux vomica; and give her a heaped dessertspoonful three times daily, and feed well and attend to comfort.

SAVE-THE-HORSE TRADE MARK REG'D.

OUR LATEST "Save-The-Horse Book"—is our 16 Years Experience—Treating 87,364 Horses—Ringbone—Thoropin—SPAVIN—Curb and ALL—Shoulder, Knee, Ankle, Hoof and Tendons. With Mistakes left out DISCOVERIES PUT IN. It is a Mind Settler; Tells How to Test for Spavin—Where and What To Do For A Lame Horse.—COVERS 58 FORMS OF LAMENESS—ILLUSTRATED.

WE Originated the Plan of—Treating Horses by Mail—Under Signed Contract to Return Money if Remedy Fails. Our Charges Are Moderate. But first write describing your case, and we will send our —BOOK— Sample Contract. Letters from Business Men The World Over on Every Kind of Case and Advice—ALL FREE to (Horse Owners and Managers—Only).—PUT HORSE to WORK and CURE HIM NOW. Write! AND STOP THE LOSS.

Address—TROY CHEMICAL CO., 148 Van Horn St., Toronto, Ont., and Bing-hampton, N. Y.

Druggists everywhere sell Save-The-Horse with contract or sent by us Exp. prepaid.

To Buyers Looking for a **GOOD STALLION**



I HAVE imported Percheron Stallions for years, always bought them from the best breeders in France, and beg to call the attention of prospect buyers to the fact that I have at the present time a better lot of Percheron Stallions in my barn than any barn in Canada. I have the big kind, the right kind, the kind that good judges are looking for. I won, as usual, more prizes at the leading fairs than all the Percheron importers put together. My horses are beautiful dappled-greys and blacks. Two to eight years old, weighing 1,700 to 2,200 lbs., with feet and legs that cannot be beat. Beautiful heads and necks. The kind that good buyers are looking for. I do not intend, and will not allow, if I can help it, anyone to give more quality and breeding for fixed price than I will. Come to the home of the Champion Prizewinners and judge for yourself.

JOHN HAWTHORNE, Simcoe, Ontario

IMPORTED **Clydesdales of Quality**

I have now on hand a stock of **Clydesdale Stallions and Fillies, Percheron Stallions, Shire Stallions, Standard-bred Stallions, etc.**

Totalling over 90 head. I have more size, more quality, more style and better breeding than was ever seen in any one barn in Canada before. If you want a big, ton stallion, or a high-class show stallion, or a big, well-bred quality filly, let me hear from you.

TERMS TO SUIT

T. H. HASSARD, Markham P.O. and G. T. R. Station
Locust Hill, C. P. R. Station. Long-distance 'phone.

For Sale Clydesdale Stallion

ONE EXTRA FINE

Four years old, by Benedict. He is a beauty and sure foal getter. AND TWO TWO-YEAR-OLD STALLIONS. VERY CHEAP.

Willowdale Stock Farm, Lennoxville, Quebec

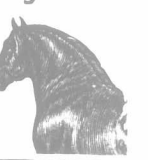
Ormsby Grange Stock Farm

ORMSTOWN, P. QUE.

A full stock of CLYDESDALES, imported and home-bred, always on hand, at prices and terms to suit breeders. Correspondence solicited.

DUNCAN McEACHRAN, Proprietor.

Clydesdale and Shire Stallions and Fillies



If you want a Clydesdale or Shire stallion or filly, or a Welsh pony, let me hear from you. I have the best blood of the breed. Horses over a ton in weight. Colts that will grow to the ton and over, with faultless characters, style and quality. I will not be undersold, and your terms are my terms.

T. L. MERCER, Markdale P.O. and Sta. L.-D. 'phone.

IMPORTED CLYDESDALES

I have for sale mares and fillies, from foals up to 5 years of age; richly bred and big in size; a number of them in foal; matched pairs, the kind to make you money. They will be sold at prices that defy competition.

L.-D. 'phone. **ALEX. F. McNIVEN, St. Thomas, Ont.**

16 Clydesdale Stallions and Fillies

5 years and under. Some winning in Scotland and Canada. Bred from such noted sires as Hawking, Everlasting, Prince of Carruchan and Baden Powell—horses that will make a ton in weight. Prices right. **W. B. ANNETT, ALVINSTON, ONTARIO.**
Wants to sell in T. R. 30 miles west of London.

When Writing Advertisers, Please Mention "The Farmer's Advocate."

QUESTIONS AND ANSWERS.
Miscellaneous.

FARM HELP.

Has the Government an agency in Toronto through which farmers can procure help? If so, what is the address?

A. W. DeL.

Ans.—There is the Bureau of Colonization, Department of Agriculture, Toronto; also the Canadian Northern Railway Immigration Agent, Toronto, Ont. The name of the latter agent is Thos. Howell.

FRUIT-GROWING IN BRITISH COLUMBIA.

1. I have about one-half an acre of fine gravelly land; forest trees seem to grow well on it. Do you think there would be any chance of success if I planted it to apple trees? If so, how would you cultivate it? It would be possible to plow it lightly. I may have to irrigate. What do you think of the Skinner overhead system, for apples, etc.? I use it for vegetables and strawberries.

2. Are there any vegetable-growers' societies in British Columbia or Alberta, and could you name some fruit-growers' societies in British Columbia?

MARKET GARDENER.

Ans.—1. If the fine gravelly land you describe is well above the river level and of fair depth, with sufficient clay in it to make it reasonably retentive of moisture, apple trees should do rather well. In the district of Golden, it is well to have a southern exposure. The shortness of the growing season prevents the commercial cultivation of the winter varieties of apples. The summer and fall kinds—such as Yellow Transparent, Duchess, and Wealthy, with the transcendent Crab, are likely to prove best. The McIntosh Red is also a hardy variety, which will mature reasonably well in suitable locations in that district. The land should be cleared at least for one year before planting. A crop of potatoes may be grown on it; or, better, it should be seeded to clover, and the crop plowed down in the fall, the trees to be planted in the following spring. The varieties mentioned could be planted about sixteen feet apart on the square system, and one-year-old whips to be used, cutting down to a height of eighteen inches above ground at the time of planting. In this district, the apple trees will grow well if given good cultivation for several years after planting, and at the end of the time may require some irrigation, preferably by the furrow system. In the meantime, the crops growing between the trees might well be irrigated by the Skinner system, if you have it installed.

2. There are no societies of vegetable-growers in British Columbia; that is, distinct from the Fruit-growers. The British Columbia Fruit-growers' Association is a Provincial organization in character, and deals with general conditions affecting both fruit and vegetables. There are now some fifteen local Fruit-growers' Associations operating in the Province, nine of them being commercial in character. A list of these can be furnished.
R. M. WINSLOW,
Victoria, B. C. Horticulturist.

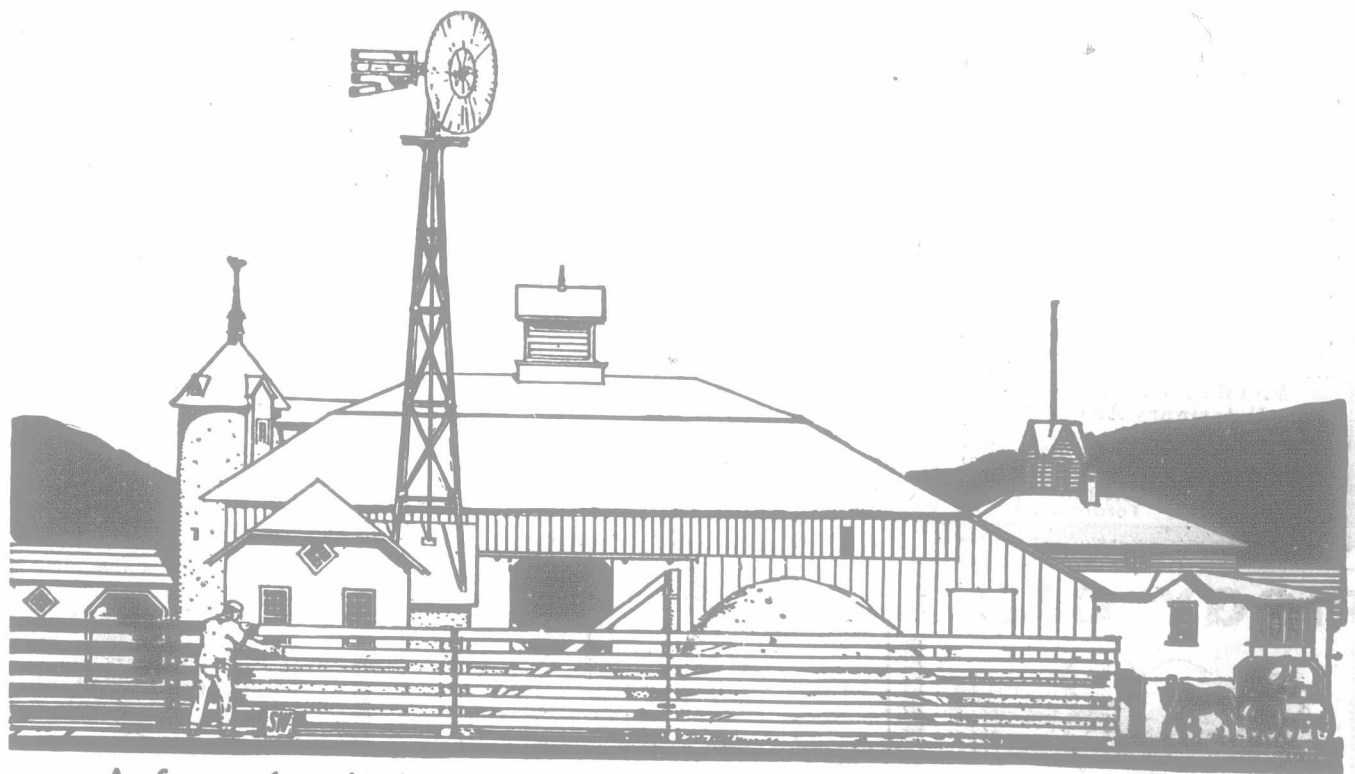
Veterinary.

CHRONIC INDIGESTION.

I have a light five-year-old stallion not used in stud. He has been ailing for some time. There seems to be a constant formation of gas in the bowels, and he becomes washy when driven. He is fed on oat straw, a little hay, oat chop, and a good-sized turnip daily. I gave him a ball, but it did not act.

W. J. G.

Ans.—This is chronic indigestion. Get his teeth dressed. Give him a purgative of 8 drams aloes and 2 drams ginger, follow up with 1 dram each of sulphate of iron, gentian and nux vomica, three times daily. Add to his drinking water one-fifth of its bulk of lime water, and feed on good hay, whole oats and bran. Do not give any raw roots.



A farm that looks prosperous is prosperous. The wise use of paint and varnish adds years to the life of buildings, wagons and implements, and saves you a big yearly loss from rust and decay. Whatever your paint or varnish need around your farm or home, there is a high quality Sherwin-Williams Paint or Varnish that will effectually protect your property.

The Farmhouse will last longer and look better, protected with SWP, Sherwin-Williams Paint, Prepared. Contains only pure lead, pure zinc, pure linseed oil, and the necessary turpentine, driers, and coloring pigments, mixed and ground in the correct scientific proportions by powerful machinery. Look for the "Cover the Earth" trade-mark shown below.

The Wagon, The Plow, The Reaper, The Binder and all other tools and vehicles decay and rust when left unpainted. On such use Sherwin-Williams Wagon and Implement Paint, easy spreading, economical and long wearing.

Windmills, Metal Roofs, etc. need special protection. Sherwin-Williams Metalastic is especially made to prevent the decay and rust of metal surfaces.

The Buggy properly painted will be in service years after the neglected buggy is past repair. Sherwin-Williams Buggy Paint made in the 9 best colors, will make the saving for you.

Barns, Sheds and other buildings of rough lumber can be durably protected by the use of Sherwin-Williams Barn Red—Spreads easily, covers well and resists the weather.

Bridges, Fences and Roofs deserve protection. The refined Creosote Oil in Sherwin-Williams Creosote Paint both preserves and protects at moderate cost.

Floors and Stairs need special attention. The ten handsome shades of Sherwin-Williams Inside Floor Paint are easy to apply, dry quickly, and stand hard wear.

Inside the House Sherwin-Williams Brighten-Up Finishes supply a paint, varnish, stain or enamel for every possible purpose. Write for a complete descriptive booklet.



SHERWIN-WILLIAMS
PAINTS & VARNISHES



Address all inquiries to THE SHERWIN-WILLIAMS Co. of Canada, Limited, Montreal, Toronto, Winnipeg, Vancouver



Nineteen Imported Clydesdale Stallions For Sale

My importation of November, 1911, are nearly all two or three-year-olds. They are ideal in draft character, with faultless quality of underpinning. They represent the best blood of the breed, being descendants of such horses as Baron's Pride, Hiawatha, Marcellus, Hiawatha Godolphin, etc. They will be priced right and on terms to suit. Farm two miles from end of street car line. Long-distance 'phone. Call me up and I will meet you in Guelph.

O. SORBY,

GUELPH, ONT.

ROSEDALE HAS FOR SALE first-prize three-year-old, two-year-old and yearling imported Shire stallions at Toronto, 1911. Also first-prize three-year-old Standard-bred stallion at Toronto. A number of imported Clyde and Shire mares in foal. Also a few SHORT-HORN BULLS. For further particulars write:
Eight miles from Toronto by G. T. R., C. P. R., and electric railway. Long-distance telephone.

J. M. GARDHOUSE
WESTON, ONTARIO



Imp. Clydesdale Stallions of Size and Quality

Our latest importation of Clyde stallions include several that were 1st prizewinners in Scotland. We have them from one year old up, of choicest breeding, big, flashy quality fellows, full of draft character. Our prices are the lowest, and our terms the best.
L.-D. 'phone. CRAWFORD & McLACHLAN, Thedford P.O. and Sta.

CLYDESDALES (Imported) CLYDESDALES

SPRING HILL Top Notchers. Stallions, mares and fillies. 65 per cent guarantee with stallions. Every mare guaranteed in foal. Ages, 3 years old and upwards.
J. & J. SEMPLE Milverton, Ontario, and La Verne, Minnesota



ORCHARD GROVE HEREFORDS

Champions of 1911 shows, winning both senior and junior herds at Winnipeg, Brandon, Regina, Edmonton, Toronto and London; also fifteen championships. Young stock, both sexes, for sale at reasonable prices.
Long-distance 'phone L. O. CLIFFORD Oshawa, Ont.

The Air-Cooled PREMIER

is not an experiment nor a toy, but a strong, reliable

GASOLINE ENGINE

that is steadily winning a reputation for its convenience, durability and wonderful economy. When writing for particulars, please state the use for which an engine is desired. Manufactured by CONNOR MACHINE CO., LTD Exeter, Ontario

Clydesdales For Sale

Imported and Canadian bred, from one to seven years old. For description and particulars apply to JAMES PATON, Swinton Park P.O., Ontario Flesheron Station, C.P.R.

Aberdeen-Angus Cattle—For Sale: A

choice young bull (15 mos.) of richest quality and breeding; also females. Glengore Stock Farm, GEO. DAVIS & SONS, Props. Alton, Ont.

Balmedie Aberdeen-Angus

I am offering for sale young bulls and heifers of the highest types of the breed. Show stock in show condition a specialty. Bred on the most popular lines. THOS. B. Broadfoot, Fergus Sta., Wellington Co., Ont.

Aberdeen - Angus

Now is the time to buy a bull; eleven for sale; also females any age or price. WALTER HALL, Drumbo station, Washington, Ont.

GOSSIP.

On February 28th, as advertised in this issue, R. & S. Nicholson, Park Hill, and H. K. Fairbairn, Theford, Ont., will sell by auction, at Elmdale Stock Farm, five miles south-west of Park Hill, eighteen yearling Shorthorn bulls; also the noted sire, Royal Lad, he sired by that prince of getters, Mildred's Royal, dam Emeline 9th (imp.). The top five dams in her pedigree were bred by Duthie; the top five sires were bred by either A. Cruickshank, W. Duthie, or W. S. Marr; no better combination of blood in existence. About forty heifers from him in the herds please their owners so much they have decided to keep them, and change stock bulls. He was three last September, weighs about 2,400 lbs., is active as a kitten, and as sure a bull as we ever used. Amongst the yearling bulls is Hopefull, by Imp. Royal Plumpton, dam Beatrice, almost full sister to the three sensational heifers, Fair Queen, Queen Ideal, and Queen of Dreamland. Golden Ray, a Campbell Golden Drop, with six crosses, all imported bulls except one, Climax, by Royal Lad, dam Imp. Rosemary 115th. A charmer is Corsican, by same sire, dam a Clementina. Beauty's Lad, by same sire, dam Imp. Beautiful, bred by Manson, of Kiblean, etc. All are of the heavy-fleshed, easy-feeding sort.

THE NEW CLYDESDALE IMPORTATION OF GEO. G. STEWART.

With a lifetime's experience as an importer of Clydesdale horses, and with very many importations to his credit, among which have been many prizewinners, both in Scotland and Canada, Geo. G. Stewart, of Howick, Que., has lately landed another lot of stallions and fillies of a type, quality and breeding that will sustain and enhance his already enviable reputation as an importer of the ideal in the Scottish draft horse. Earl of Ancaster is a dark brown four-year-old, of close, smooth, cart-horse type, showing great strength of bone, sired by the celebrated Glasgow champion, Royal Chant, dam by the renowned Mains of Airies, and granddam by the Cawdor Cup champion, Prince of Kyle, great-granddam by the immortal Darnley. This horse, although not up to a big size, carries the most renowned blood of the breed, and should prove a great sire. Royal Derwent is a bay, rising four years, by Lord Derwent, dam by Sir Ronald, granddam by Just in Time, is a roppy, smooth colt of quality, one that should do well in any section. Royal Visitor is a black, rising three, a big, upstanding colt of style, character and quality; one of the few extra good colts. His underpinning is just right, and he moves extra well, sired by the Kilmarnock champion, Royal Edward, dam by the great Baron of Buchlyvie, granddam by Prince of Scotia. With such breeding, and his high-class individuality, he is a most desirable colt. All of these stallions in their pedigrees have four numbered dams. The fillies are one-, two- and three-year-olds, all are big and drafty, with strong, flat bone, and their breeding is the best. A filly of high-class style and quality, that when properly fitted would take a heap of beating in the show-ring, is the brown, Duchess of Fife, rising three years, sired by the great Baron Solway, dam by Hector. She has five numbered dams. Another, same age, with more character, but not a choice show mare, is the black, Lady Milly, by the renowned show and breeding horse, Duneidin, dam by the noted prizewinner, Knight of Cowal. Still another, rising three years, is the bay, Georgina Stewart, by MacEric 2nd, dam by Lord Macgregor; she has three numbered dams; a big, strong filly that will grow to a big size. In yearlings, there are two, Daisy Bell, a brown, by the H. & A. S. first-prize horse, Baron's Best, dam by Lord Mac; and Violet Drummond, a brown, by Pencie, dam by Royal Erskine. The former has four numbered dams, and the latter three; they both have great draft character, and big, flat bone. The oldest of the shipment is the bay, Flora Pride, rising four, by the renowned champion, Boreland Pride, dam by Balmadie Queen's Guard. She has five numbered dams, a big, choice filly. All of these are for sale, and Mr. Stewart never allows any other man or firm to undersell him, as his representative in Scotland is always in a position to ship out a horse on short notice.

"Here is my Letter to You. It is Worth One Thousand Dollars"

DEAR FRIEND:

If you're going to buy a horse, you look at his feet. But if you buy a building, you look at the ROOF last. A horse isn't worth more than his feet, and a building isn't better than its roof.

I want you to roof right. I want you to get the right stuff from me at the right price. I want to make your roof a good deal better than your building, because then you'll get everything out of the building that it can give in shelter, protection and proper storage. The right roof does more than anything else for any building.

My Oshawa Shingles have taken 50 years of my thought and time and invention. It was hard work. I tried to make a perfect shingling. I worked for years to get just the right kind of metal to last longest. I worked to get the easiest and best lockjoint that ice couldn't pry open. I worked and estimated hard to get a roof neither too heavy nor too light. I worked for a time-proof shingling. I have got it for you. It will last 100 years.

When you use this Oshawa Shingle of mine what do you get? First, you get a shingle so good to-day, that it gives perfect service. It suits any building. It meets every kind of need for a roof at low cost and with long service. Second, you pay a moderate price. This is because many buyers unite on using my Oshawa Steel Shingle. The Canadian Government Bernier Arctic Expedition used my shingle against Arctic ice and blizzards. The North-



West Mounted Police use it, another Government proposition, against Arctic snow on permanent construction. The West Indies uses it against terrific heat and rain. You find it in Japan because it stands earthquakes. My Oshawa roofing is on the farms of South Africa. Here is ONE roof from Arctics to Tropics. World sales are my reward for high quality. Third, you have a roof that is easy to lay and lay right. You can lay it and lock it yourself. It will not leak nor burn. It is lightning-proof.

But I want you to pry into every detail of my proposition first. I want you to know it is RIGHT, if you send me a post-card. I have sent thousands of them out, for they have useful hints on planning barns and houses. The book is worth money to you, and if it leads you to use my Oshawa Shingles, the roof will be protecting your barn one hundred years from now. Send for this book of mine now, to my nearest address below. If you are about to build a barn, it may have a hint or new idea worth \$1,000 easily to you, even if you do not buy a roof. If you do get a Pedlar Roof from me, you get double or triple service from the building. I will be looking for your enquiry. Yours truly, (Sgd.) G. A. Pedlar

The PEDLAR PEOPLE Limited, of Oshawa

Established 1861

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"How to Raise Calves Cheaply and Successfully Without Milk"

Contains full information and complete feeding directions for using

Blatchford's Calf Meal—The Perfect Milk Substitute

Three or four calves can be raised on it at the cost of one where milk is fed.

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ARE OFFERING

15 High-class Scotch Shorthorn Heifers

At moderate prices, including Cruickshank Non pareils, Cruickshank Villagers, Marr Emmas, Cruickshank Duchesses of Glosters, Bridesmaids, Bruce Fames, Kinellars, Clarets, Crimson Flowers, and other equally desirable Scotch families, together with a member of the grand old milking Atha tribe, which have also been famous in the showing.

Arthur J. Howden & Co., Columbus, Ont.



10 SHORTHORN BULLS 10

If you are looking for a young bull to head a purebred herd, or one to cross on grade cows to raise first-class steers, I have them to suit all customers at very reasonable prices. They are reds and roans, and one extra good white show calf; ages from 9 to 14 months, nearly all sired by imported bulls, and from the best Scotch families of cows. Will be pleased to furnish breeding and prices.

Claremont Stn., C.P.R., 3 miles. Pickering Stn., G.T.R., 7 miles.

JOHN MILLER, Brougham P.O., Ont.

Shorthorns and Clydesdales—We are offering 10 choice young bulls, serviceable age, sired by His Grace (imp.) = 69740 = ; who is also for sale or exchange. In Clides our present offering are two stallions rising 3 and 4 years old; big quality horses, from imported sires and dams; also cows and heifers, mares and fillies. Write us, or come and see the n. A. B. & T. W. DOUGLAS, Strathroy, Ont. Farm one mile north of town.

Glengow Bulls

At a Sacrifice

Seven fine and well-bred yearling bulls that must be sold. Satisfaction guaranteed. Worth your while to price them before buying elsewhere.

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MAPLE LODGE STOCK FARM

1854 - 1911

Am offering a splendid lot of young Shorthorn bulls for sale now; good colors and choice individuals; several of them from high-class milkers. A few select Leicesters for sale yet.

A. W. SMITH, Maple Lodge, Ontario
Lucan Crossing, G. T. Ry., one mile.

OAKLAND SHORTHORNS!

We have another lot of young bulls ready for winter and spring trade, out of good breeding dual-purpose cows, and sired by our herd header, Scotch Grey 72692; a fine roan; one of the best bulls in Ontario. Good stock and no big prices. Will also sell cows and heifers; about 50 to select from.

JOHN ELDER & SON, HENSALL, ONTARIO

Shorthorns of Show Calibre

Only one bull for sale now, but 13 grand heifers by Mildred's Royal must be sold, as we have no bull to breed them to. Come and see them, or write.

GEO. GIER & SON, Grand Valley, Ont.

SPRING VALLEY SHORTHORNS

Herd headed by the two imported bulls, Newton Ringleader, = 73783 =, and Scottish Pride, = 36106 =. The females are of the best Scotch families. Young stock of both sexes for sale at reasonable prices. Telephone connection.

KYLE BROS. - - - Ayr, Ontario

Shorthorns and Swine—Am now offering a very choice lot of cows and heifers, safe in calf, and some choice young bulls for the fall trade; also Berkshire and Yorkshire pigs; showyard material.

ISRAEL GROFF, Elmira, Ont.

Don't Wear A Truss

After Thirty Years' Experience I Have Produced An Appliance for Men, Women or Children That Cures Rupture.

I Send It On Trial.

If you have tried most everything else, come to me. Where others fail it is where I have my greatest success. Send attached coupon today and I will



The above is C. E. Brooks, of Marshall, Mich., who has been curing Rupture for over 30 years. If ruptured write him to-day

Send you free my illustrated book on Rupture and its cure, showing my Appliance and giving you prices and names of many people who have tried it and were cured. It gives instant relief when all others fail. Remember I use no salves, no harness, no lies.

I send on trial to prove what I say is true. You are the judge and once having seen my illustrated book and read it you will be as enthusiastic as my hundreds of patients whose letters you can also read. Fill out free coupon below and mail today. It's well worth your time whether you try my Appliance or not.

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C. E. Brooks, 236 State Street, Marshall, Mich. Please send me by mail in plain wrapper your illustrated book and full information about your Appliance for the cure of rupture.

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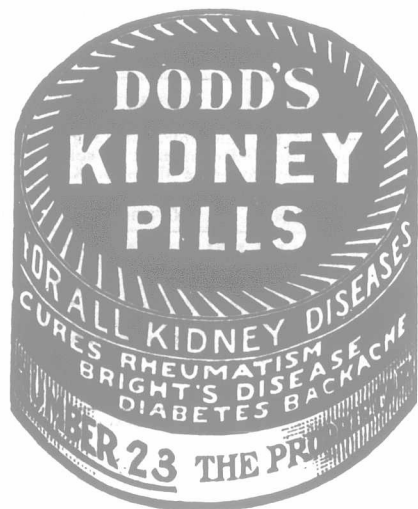
IMPORTED BULL FOR SALE
Our Green Grove herd of Shorthorns is headed by the two imported bulls Imp. Spectator = 50694 = and Imp. Roy = 55038 =. Present offering: Stock bull Imp. Spectator and two choice young bulls, herd heifers, fit for service; also good females
Geo. D. Fletcher Binkham Ont. Erin Sta C.P.R.

Shorthorns, Shropshires and Berkshires
For sale: I have young bulls and heifers, bred for milk production. High-class flock-heads, winners, and covered to the ground. Berkshires, both sexes of breeding age, show stock
W. Wilson, Brickley P.O., Hastings Sta., G.T.R.

Shorthorns Choice selections of bulls and heifers at very reasonable prices. Robert Nichol & Sons, Hagersville, Ont.

"It took that racing automobile twenty minutes to pass this house."

"Impossible."
"Fact. I could hear it ten minutes before it got here, and I could smell it ten minutes after it passed."



GOSSIP.

ANOTHER ROUND AMONG THE Ayrshire MEN OF QUEBEC.

On one of those typical Quebec winter mornings, with the thermometer standing at a point, which, to say the least, was "bracing," we took train at Montreal for a run through the districts of Chateauguay and Huntingdon for our annual visit among the Ayrshire-breeders in those famous Ayrshire districts. Our first stop was at Carr's Crossing, a station on the Montreal-Massina Springs branch of the G. T. R., some four miles south of the town of Huntingdon. From there about one mile, is the well-known Springbrook Stock Farm, for many years so well and successfully carried on by W. F. Stephen, now the popular secretary of the Canadian Ayrshire-breeders' Association. About one year ago, this splendid farm, together with the high-class herd of Ayrshire cattle that for so long, under the skillful direction of Mr. Stephen, sustained their reputation as one of the highest-producing herds in the Dominion, was purchased by McMillan & Leggat, whose life-long experience in the care of Ayrshire cattle is a guarantee that still greater things and bigger results are, in the near future, due from the herd, which is now about 45 strong, made up of imported and Canadian-bred animals, headed by the high-class and well-finished bull, Imp. Auchenbrain Good Gift, of the noted Auchenbrain Famous Beauty tribe, and his dam has a Scotch record of 7,168 lbs. milk in 32 weeks, testing 3.8 per cent. butter-fat. Under the direction of the herd's former owner, a careful account has been kept of the daily and yearly yield of every one in milk, followed by a thorough culling of all that did not reach a profitable standard of production, with the inevitable result that the Springbrook cows of today are every one a profitable producer, and the daughters and granddaughters of profitable producers. Several of those now in the herd are in calf to the \$2,600 champion bull, Bargenock Victor Hugo (imp.), the others to the present stock bull. Anything in the herd is for sale, as the owners intend to make an importation from Scotland in the near future. An attractive offering is a number of spring-calving cows, as well as five choice young bulls, sons of the present stock bull. The farm is connected with long-distance telephone from Huntingdon. When writing McMillan & Leggat, address all correspondence to Trout River P. O., Quebec.

Kelso Stock Farm.

About three miles east from Carr's Crossing Station is the well-arranged farm of D. A. MacFarlane, known as the Kelso Stock Farm, named after the village of Kelso, which is Mr. MacFarlane's P. O. This is one of the oldest-established herds of Quebec, now about fifty strong, at the head of which is the typical quality bull, Imp. Lessnessock Scottish Thistle, whose breeding is unexcelled, and who is transmitting his good breeding and qualities to his offspring. Few herds in Quebec have received more attention in the matter of careful selection and culling than has the Kelso herd, and few breeders in Quebec are better qualified to select the possibilities than Mr. MacFarlane, with the result that in the herd of imported and Canadian-bred animals, 50 and 60 lbs. a day cows are common. There is nothing in the herd Mr. MacFarlane will not price, and he sure has a choice selection of young things to offer in both heifers and young bulls. Write him your wants to Kelso P. O., Que.

Burnside Ayrshires.

A few miles run north of Huntingdon brought us to Howick, and in sight of the station is the famous Burnside Farm of R. R. Ness, from which no man ever went away hungry. No introduction is needed in speaking of this farm. Either on this continent or in the land of the heather, probably no man on this broad expanse has done so much for Ayrshire-breeders generally, or to bring the breed before the people, as has Mr. Ness, and to him great credit is due for the high position the breed holds to-day, for there is scarcely a herd in either Canada or the United States but has representatives imported by him. In his compactly arranged and well-arranged stables just west of the farm, something over 150 head, all of them bred or bred from imported stock, which are such great cows.

DAVIES' ANIMAL FERTILIZERS

Davies' Potato Special
Davies' Lawn Dressing
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Foods not "Tonics" or "Condition Powders"
Davies' Poultry Bone (3 grades)
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ANIMAL LIVE STOCK FOODS

Cheap sources of fertilizer and BonePhosphates
Animal Meal (feeding tankage)
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Price Lists and literature sent on request. Dealers wanted everywhere. Also responsible men for fertilizer agents.

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SALEM SHORTHORNS Headed by (Imp.) Gainford Marquis, undefeated in Britain as a calf and yearling, and winner of junior championship honors at Toronto, 1911. Have on hand two yearlings and a number of bulls under a year for sale at reasonable prices.

J. A. WATT, Salem, Ont. Elora Sta, G. T. R. and C. P. R.

Brampton Jerseys Bulls fit for service are getting scarce. Just a few left. Yearling heifers in calf are in great demand; 6 for sale; 6 now being bred. Brampton Stockwell the sire. A few good cows and some calves for sale. Production and quality

B. H. BULL & SON, BRAMPTON ONT.

Don Jersey Herd Offers young bulls and heifers for sale; heifers bred to Eminent Royal Fern.
D. Duncan, Don, Ont., Duncan Stn., C.N.R.
Phone Long-distance Agincourt.

High Grove Jerseys & Yorkshires No better blood in Canada. Present offerings: Choice young sows due to farrow in March. Jerseys, all ages, both sexes.
Arthur H. Tufts, P. O. Box III, Tweed, Ont.

Burnside Ayrshires Champions in the show ring and dairy tests. Animals all ages and both sexes for sale.
R. R. NESS, Howick, Quebec
Long-distance phone in house

City View Ayrshires—One very choice bull, 1911 bull's, all grand individuals, and from R. O. P. ancestors; could spare two or three more cows.
Write or phone.
JAS. BEGG, R. R. No. 1, St. Thomas.

GLENHURST AYRSHIRES Established over 50 years ago, and ever since kept up to a high standard. We can supply females of all ages and young bulls, the result of a lifetime's intelligent breeding: 45 head to select from. Let me know your wants.
JAMES BENNING, Williamstown P.O. Summerstown Sta., Glengarry Co.

CRAIGALEA AYRSHIRES! Our record: Every cow and heifer entered in Record of Performance, and retained in herd until test was completed, has qualified. Heifers and young bulls for sale of show-ring form. H. C. HAMILL, BOX 2, ROY P. O., ONT. Markham, G. T. R.; Locust Hill, C.P.R. Bell phone connection from Markham.

CHERRYBANK AYRSHIRES! Imported and Canadian bred, with R. O. P. official records, headed by the renowned champion, Imp. Netherhall Milkman. Richly-bred females and young bulls for sale.
P.D. McArthur, North Georgetown, Que.

STONEHOUSE AYRSHIRES Are coming to the front wherever shown. Look out for this at the leading exhibitions. Some choice young bulls for sale, as well as cows and heifers.
HECTOR GORDON, Howick, Quebec.

Ayrshires Bull calves, from 4 months to 9 months, from imported sire and Record of Performance dams. Records \$0 to 63 pounds per day.
V. Dymont, R. R. No. 2, Hamilton, Ont.

Ayrshires and Yorkshires We have still some good young bulls. Now is the time to buy for the coming season, before the best go. We have females any age, and can fill orders for carlots of Ayrshires. Pigs of either sex on hand.
ALEX. HUME & CO., Menie, Ont.

HILLCREST AYRSHIRES.—Record for production and large teats. Record of Performance work a specialty. Fifty head to select from. Prices right.
FRANK HARRIS, Mount Elgin, Ont.

as Barcheskie Lucky Girl (imp.), winner of the dairy test at Ottawa last year over all breeds, and this year winning over all the Ayrshires, with a test again higher, the best test made last year by any animal in the list, of whatever breed, except her own. As a two-year-old she gave, officially, in ten months, 8,710 lbs. milk, and dropped her second calf inside 11 months, and as a mature cow her regular yield is 66 lbs. a day. She has now a choice bull calf, by Imp. Morton Mains Sensiur. Burnside Lucky Girl 2nd is a daughter, sired by the several-times champion Barcheskie King's Own (imp.). As a two-year-old, in 11 months, she gave 8,410 lbs. milk, and as a three-year-old she was first in the dairy test at Guelph, and third in the test at Ottawa. Two other daughters of the old cow, one a yearling, the other a calf, one sired by the Seattle champion, Netherall Douglas Swell (imp.), the other by the unbeaten one- and two-year-old in Scotland, Morton Mains Sensiur (imp.). Another of the great cows is Finlayston Maggie 3rd (imp.), a 60-lb. a day cow, and who for a time, held the world's Ayrshire record for the age, of 10,975 lbs. milk and 527 lbs. butter-fat in one year. She is the dam of the great bull, Finlayson, who has 22 daughters in the official A. R. records, 10 of which qualified at their first calving, with records that averaged 10,500 lbs. milk in the year. Three of her daughters are now in the herd, sired by the three great bulls, King's Own, Cavalier, and Sensiur. Denty 9th of Auchebraim (imp.), the 11,795 official-record cow, is still in great bloom. She has left for Mr. Ness two very choice daughters, by Barcheskie King's Own. Auchebraim Fanny 9th (imp.), gave as a three-year-old 54 lbs. a day, and a year later 64½ lbs. a day. She is a great cow. Out of her, by Morton Mains Sensiur, is a right nice bull calf. Burnside Lady Pearl has a record of 10,000 lbs. She is a daughter of Barcheskie Duke of Clarence (imp.). Those mentioned are only representative of the high-producing qualities and high-class breeding of the entire herd. The females are now being bred to a son of the famous Scotch sire of champions, White Cockade. For chief stock bull, Mr. Ness has lately purchased Hobsland Masterpiece, a son of Hillhouse Cherry 10th, with a three-year-old record of 10,750 lbs. milk testing 4.17 per cent. butter-fat in 42 weeks. In the herd are some 75 heifers, one, two and three years of age, all of which are for sale to make room for the big spring importation.

Stonehouse Ayrshires.

Our next move brought us to the famous Stonehouse herd of Hector Gordon, one of the most noted show herds of Canada, which was established many years ago on specially-selected imported animals, and continually since has had at the head the best bulls procurable, bred in the country of the breed's origin. Special attention has been given to the development of heavy production, both by judicious breeding, udder massage, and properly-balanced ration. This special attention has resulted in adult cow records of 11,000 lbs. milk, and two-year-old records of 7,800 lbs. in the year. The herd is now about 75 strong, imported, or from imported stock. The chief bull in service is Imp. Hillhouse Freetrader, whose honors last fall were first at Toronto, and third at Ottawa. Assisting him is the grandly-bred Stonehouse Winter King, whose dam, in six months, gave the unprecedented yield of over 8,400 lbs. As to the quality of the herd, their phenomenal show-ring record for the past several years, particularly at Toronto and Ottawa, is too well known to need comment. Anything in the herd is for sale, including several young bulls, from calves up to an age for service. One is out of a dam with a record of 13,000 lbs. in the year; another is the assistant stock bull mentioned above; another's dam has an official record of 14,000 lbs.; another out of an 8,900-lb. dam, and so on. In heifers, there are a large number of one- and two-year-olds that are certainly choice having.

Cherrybank Ayrshires.

Another short drive through the crisp morning air, with a fine, drifting snow doing its best to find the most tender spots of a one's spinal-column, brought us to the renowned Cherrybank Farm of

Fairview Farms Herd

Is where you can secure a son of Pontiac Korn-dyke, admitted by all breeders to be the greatest of them with records over 37 lbs. each. Then, look at the work his sons are doing. HE IS THE GREATEST PRODUCING SIRE OF THE BREED. THROUGH HIS SONS—Every son of Pontiac Korn-dyke that has daughters old enough to milk is a sire of good ones. We can offer you several young ones that will give you great daughters.

E. H. DOLLAR,
HUEVELTON, N. Y.

Near Prescott

Summer Hill Holsteins



The only herd in Canada where there are 7 cows averaging almost 28 lbs. butter each in 7 days. Every record made on the farm. Present offering: 15 yearling heifers in calf, 10 imported heifers, some bred; 1 bull calf from a 31¼-lb. dam, 1 bull calf from a 29¼-lb. Junior, 4 years old; 1 bull, 8 months old, from a 25½-lb. Junior, 4 years old. Come and make your selections now. Prices are right. Trains met when advised.



D. C. FLATT & SON, R. F. D. No. 2, Hamilton, Ont. Telephone 2471.

AUCTION SALE

The Lakeview Stock Farm will offer for sale at their barns near Bronte, Ont. on MONDAY, MARCH 25th, 1912

Pure Bred Holstein Friesian Cattle and Reg. Clydesdale Mares

Col. D. S. Perry of Columbus, O., will conduct the Sale, which will be held under cover, rain or shine. Send in your name for catalogue and arrange to attend this sale.

E. F. OSLER, Bronte, Ontario

Centre and Hillview Holsteins—We are offering young bulls from Sir of his dam sire dam and grand dams is 662 8 lbs. milk and 30.58 butter, 7 days, and 2,750.80 milk and 114.5 butter in 30 days; also Brookbank Butter Baron, who is a proven sire. He is sire of champion 3-year-old 30-day, 2-year-old 7-day and 2-year-old 30-day. Long-distance phone. P. D. EDE Oxford Centre P.O. Woodstock Stn.

Evergreen Stock Farm—High-class Registered Holsteins. Herd headed by Prince lbs. butter in seven days. For sale: One extra good bull, ready for service, and one bull calf, whose dam won second prize in milk test at Guelph Winter Fair, testing 4.2% butterfat. Could also spare a few yearling heifers in calf. A. E. HULFT, Norwich, Ont.

Springbank Holsteins and Yorkshires—Two choice bull calves for sale, both from good milking strains. Also a few young sows. Wm. Barnet & Sons, Living Springs P. O., Ont. Fergus station, C.P.R. and G.T.R.


Silver Creek Holsteins—We are now offering about a dozen yearling heifers and 3 young bulls. They are all of superior type, and 7-day records that average 27 lbs., is at head of herd. A. H. TEEPLE, CURRIES P. O., Ont., Woods'ock Station. Phone connection.

Maple Line Holsteins and Yorkshires—Herd headed by Homestead Colantha Sir Abbecker 2nd, whose dam, sire's dam, g. dam average 29 61 lbs. butter 7 days. For sale at bargain prices, choice bull calves from R.O.P. cows. W. A. BRYANT, Middlesex Co., Cairngorm, Ont.

Evergreen Stock Farm offers a choice lot of bulls ready for service, from high-testing, deep-milking Record of Merit ancestors. Also a few females for sale. Herd headed by Francy Sir Admiral; dam's record 26.71, sire Sir Admiral Ormsby. Write for prices. F. E. PETTIT, Burgessville, Ont.

Calves—Raise them without milk. Booklet free. CLOUGH & CO., Lennoxville, Que.

When Writing Mention Advocate



Purebred Registered
HOLSTEIN CATTLE
The most profitable dairy breed, greatest in size, milk, butterfat and in vitality. Send for FREE illustrated descriptive booklets. Holstein-Friesian Assn., F. L. Houghton, Sec'y, Box 127, Brattleboro, Vt.

WELCOME STOCK FARM HOLSTEINS—We have direct descendants of these unequalled performers, Peitertje Hengerveld Count 1 e Kol, sire of three daughters above 32 lbs.; Pontiac Korn-dyke, two daughters above 37 lbs.; Hengerveld De Kol, with the longest list of A. R. O. sons and daughters; Blanch Lyons, dam of two daughters above 33 lbs.; Colantha 4th Johanna, whose yearly production of butter and milk stands unequalled. Our main stock bull, King Lyons Netherland, is a fine individual, whose two gran-dams and dam's sister average 34.22. Both sexes for sale. C. B. LLERT & J. LEUSZLER, Tavistock, R. R. No. 6.

A GREAT COMBINATION

Bulls eight months old for sale, combining the blood of Pontiac Korn-dyke and Hengerveld De Kol, with five 30-lb. cows in their pedigrees, whose milk contains over 4 per cent. fat. These are the two greatest Holstein-Friesian bulls in America.

A. A. Farewell, Oshawa, Ontario

MAPLE SOIL STOCK FARM

Holstein yearling heifers with A. R. O. testing over 20 lbs., got by Idalin's Paul Veseman, his dam testing 24.78 lbs., served by King Segis Pieterje, his dam 30.51; also a few bull calves from 3 to 6 months old. Belmont Stn., C. P. R.

H. C. Holtby, Belmont, P.O., Ont.

The Maples Record of Holstein Herd

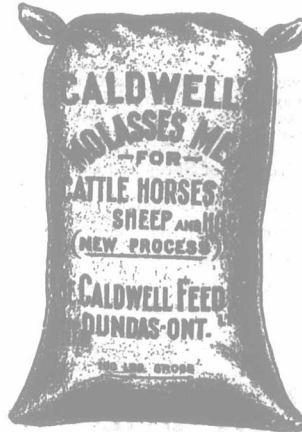
A few choice bulls ready for service, sired by King Poach De Kol; also a few young bull calves, sired by Prince Aggie Meschilde, whose dam won first at Toronto, 1911, and sire's dam first in dairy test at Guelph, 1908 and 1909; his three nearest dams average over 25 lbs. butter in 7 days. WALBURN RIVERS, FO DEN'S, ONTARIO

HOLSTEIN BULLS

Minsters Farm offers bulls fit for service in spring from Lakeview Burke Fayne, whose dam and sire's dam average 23.14 lbs. butter in 7 days, and R. O. P. cows; also cows for extended pedigrees. Write: RICHARD HONEY & SONS, Brickley, Ont. Also Yorkshires of both sexes.

The Great Winter Feed

Keeps animals free from coughs, colds and digestive disorders



To keep his animals in good condition throughout the long winter months is a problem the Canadian stock raiser has to solve. And many are finding that the solution lies in feeding Molasses Meal.

Many of the most prominent cattle, sheep, hog and horse raisers in the Dominion now look upon Molasses Meal as the great winter feed. They do so because Molasses Meal contains unique antiseptic properties that act as preventatives of coughs, colds, diarrhoea and other digestive disorders.

Molasses Meal contains the essential ingredients domestic animals require in

winter—ingredients lacking in a straight cereal diet. This fact explains why horses, cattle, sheep and hogs fed with it are so easily kept in condition and take on weight so rapidly.

Start feeding your stock with Molasses Meal as soon as you can get a supply. Let them benefit from this highly-nutritious meal, over 80 per cent. of which is pure cane molasses.

By feeding molasses in this form all the objections against feeding it raw are removed, for it is easy to handle, and does not stick to the fingers, to the feed-box, or to the animal. No dilution with

water is required. None is wasted.

It is very economical to use. And it adds 25 per cent. to the value of the other rations. Its low cost may surprise you, especially if you buy it direct from the mill.

Caldwell's Molasses Meal

Clip out, fill in and mail the coupon, and learn how you can buy Molasses Meal at direct from the mill prices. We will also send a booklet telling you how to feed it for best results.

Caldwell Feed Co. Ltd.
Dundas, Ontario

CUT ALONG HERE

Please send me your booklet and full particulars about buying Molasses Meal at direct from the mill prices, as advertised in "Farmer's Advocate."

Name

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SEVERE COLD DEVELOPED INTO PNEUMONIA DOCTOR SAID HE WOULD NOT LIVE.

Next to consumption there are more deaths from pneumonia than from any other lung trouble.

There is only one way to prevent pneumonia, and that is to cure the cold just as soon as it appears. Dr. Wood's Norway Pine Syrup will do this quickly and effectively.

Mr. Hugh McLeod, Esterhazy, Sask. writes:—"My little boy took a very severe cold, and it developed into pneumonia. The doctor said he would not live. I got some of your Dr. Wood's Norway Pine Syrup and he began to improve right away. He is now a strong, healthy child and shows no signs of it coming back."

Do not be talked into buying any other Norway Pine Syrup, but insist on getting the original "Dr. Wood's." It is put up in a yellow wrapper; three pine trees the trade mark; price, 25 cents.

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

LINCOLN LONG-WOOL SHEEP And Shorthorn Cattle.

The Riby Grove Flock and Herd, owned by MR. HENRY DUDDING,

Is the source to which practically all the leading export buyers have resorted from time to time to obtain stud sires and dams, and rams and ewes of unrivalled merit and quality.

Apply: THE OWNER, RIBY GROVE, STALLINGBOROUGH, GRIMSBY, ENGLAND.

"Pa, what's a collision?" asked Johnny. "Wha—Oh. A collision is when two things come together."

WOMEN STILL ARE PRAISING THEM

Mrs. Geo. Butler tells what Dodd's Kidney Pills did for her.

She was tired, nervous and run down, and suffered from pains in the back.—Dodd's Kidney Pills cured her.

Paquetville, Gloucester Co., N. B., February 5.—(Special).—That Dodd's Kidney Pills are suffering woman's best friend was never better demonstrated than in the case of Mrs. Geo. Butler, a well-known and highly-respected resident of this place.

"My trouble was brought on by hard work," Mrs. Butler tells her friends. "For four years I suffered from pain in the back. I was always tired and nervous. My head ached, and I had dark circles under my eyes, which were also puffed and swollen.

"I was in a generally run-down condition and feeling very much discouraged when I started to take Dodd's Kidney Pills, and I can only say I found relief at once."

The mainspring of woman's health is the kidneys. If the kidneys are right, the blood will be pure. Pure blood is absolutely essential to good health. Dodd's Kidney Pills make the kidneys right.

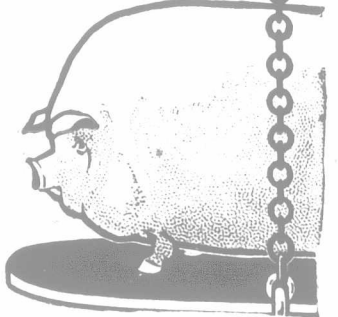
P. D. McArthur, whose herd of over 60 head of the choicest show Ayrshires in the country was found comfortably quartered, and in right nice condition. Although it is but a few years since this herd was established, it has already been brought to a standard of excellence seldom attained by a herd in a lifetime. Mr McArthur, as a breeder and fitter of Ayrshires, and as an expert in selecting the comers, has made an enviable reputation from the Atlantic to the Pacific by his phenomenal success at the leading shows, from the far East to the far West, a reputation greatly enhanced by his expert judgment, shown when he selected as chief stock bull the invincible Netherhall Milkman (imp.), a bull that has covered himself and his owner with honor in all the leading show-rings from one end of the country to the other against all comers. He is not only the greatest show bull the country has ever seen, but he is making good as a sire, his heifers showing remarkable production and persistency. Assisting him in service is Jupiter of Hickory Hill, a son of the great Flos Morton, who at 10 years of age made the great record of 14,000 lbs. milk and 555 lbs. butter-fat, equivalent to 693.3 lbs. butter, averaging for the year over 13 lbs. per week. The females of the herd range in milk production records, from 13,110 lbs. for mature, down to 6,104 lbs. for two-year-olds. A big majority of the young things are the get of the old stock bull; these are being bred to the young bull, a combination that must surely produce big results. Anything in the herd is for sale, including a number of young bulls, several of them the get of Milkman, and several of them half-brothers of last fall's Toronto junior champion bull, being got by the famous bull, Sir Favorite of Hemmingford, whose dam, Favorite of Auchenbrain (imp.), has a Scotch record of 9,850 lbs. The dams of the last-named bulls have an average butter-fat test of 4 per cent., and over Stockwood Ayrshires.

Another move and we arrived at the splendid home of D. M. Watt, St. Louis, Que., known as the Stockwood Farm. Here, we again found the large herd of some 50 head in prime condition, and looking like leaving a profitable balance on the right side of the ledger. Established many years ago, this splendid herd has produced many prizewinners at the leading Quebec shows, and at Ottawa. Imported and Canadian-bred, many of the latter daughters of that successful sire, Imp. Lessnessock Macdonald, they are now being bred to the present stock bull, Imp. Whitehill Freetrader, a young bull of exceptionally true lines, and perfection of type; he will surely make a great name as a show bull. Very many of the females in milk are giving 50 lbs. a day, cows whose large, shapely udders, look every inch what they are. There is nothing in the herd that will not be priced, and the splendid bunch of heifers look most attractive for a herd foundation. Only two young bulls are left, one a March, the other a September-born. They are a level, typical pair, that will surely make good. Hillview Ayrshires.

On arrival at the Hillview Farm of R. Mr. Howden, near St. Louis Station, we found the genial proprietor in his usual happy mood, and well he might be, with his splendid farm and farm appointments, and his well-regulated stables, overflowing with an exceptionally choice selected herd of imported and Canadian-bred Ayrshires, all in the prime condition, their large, well-balanced udders indicating big production, and at their head the well-and true-lined bull, Imp. Hobsland Hero, whose exceptionally good type he is proving his ability to transmit to his offspring, exemplified in the high-class character of the young things now on hand, the equal of which we have seldom seen, both in heifers and young bulls, a few of which Mr. Howden can supply to anyone looking for high-class stud. Nothing in the herd is reserved. Among others, we were particularly struck with the high-class quality and type of a young bull about ten months old, true in his lines, with a full depth of rib, and excellent type, that would make a show bull of any show. Another almost as choice, but a little older, both are out of extra good dams. Write Mr. Howden your wants. Long-distance phone P. O., Quebec.

INTERNATIONAL STOCK FOOD is a splendid Pork Producer. The successful hog-raiser is the man who bends every effort to prevent disease and—KEEP HIS HOGS HEALTHY. He provides his hogs with warm, clean quarters—and adds a little "INTERNATIONAL STOCK FOOD" to every feed.

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International Stock Food Co., Limited, Toronto. Southdown Ewes—A few good shearlings, and two-shear ewes in lamb to my Toronto champion ram. Angus Cattle—Buy an Angus bull to produce steers that feed easily and top the market. Colles that win at the shows and make excellent workers.

FARNHAM FARM OXFORDS AND HAMPSHIRE DOWNS. Special offering for sixty days of 40 superior yearling Oxford Down ewes, bred to our champion ram. Long-distance phone in the house; ask Guelph for 52, two rings. Henry Arkell & Son, Arkell, Ontario.

Cattle and Sheep Labels. Metal ear labels with owner's name, address and any numbers required. They are inexpensive, simple and practical. The greatest thing for stock. Do not neglect to send for free circular and sample. Send your name and address to-day. F. G. JAMES, Bowmanville, Ont.

BLAIRGOWRIE STILL TO THE FRONT. Present offering: Shropshire and Cotswold ewes bred to high-class rams; also ewe lambs. In Clydesdales I have choice young mares and filly foals. In Shorthorns are several young bulls of serviceable age. Herd headers of quality. Myrtle, C. P. R. Sta. L.-D. Phone. JOHN MILLER, JR., Ashburn, P.O.

Maple Grove Yorkshires ARE EQUAL TO THE BEST. Present offering: Twenty-five sows bred to farrow from Aug. to Oct. All first-class, bred to No. 1 quality boars. All big, roomy, growthy stock, and ranging from six months to two years old. Eight young boars fit for use; choice long fellows of excellent breeding, and younger pigs of various ages. Pairs not related. Our prices will suit the average farmer, but are consistent with the best quality. Stock shipped C. O. D. and on approval. Correspondence and personal inspection invited. Long-distance phone via St. Thomas. H. S. McDIARMID, FINGAL, ONTARIO. Shedden Station, P. M. and M. C. R.

Poplar Lodge Southdowns and Berkshire sheep, rams or ewes, ram or ewe lambs, Berkshires, from youngsters up to breeding age, of both sexes; the highest types of the breeds in proper fit. SIMEON LEMON, Kettleby P.O., Schonberg or Aurora Stns. Phone.

Shropshire Sheep, Shire Horses and Poultry—I have bred very many winners in Shropshires, and never had a better lot of both sexes for sale. Order early. Also a big quality shire filly and White Wyandotte poultry. W. D. MONKMAN, Bond Head, Ont. Phone connection.

Tamworths and Poultry We can supply both sexes and any age, bred from the champions of Canada; show stock a specialty. Also Toulouse Geese, Pekin Ducks and S. C. White Leghorns. D. DOUGLAS & SONS, Mitchell, Ontario.

Hampshire Hogs We have the highest-scoring and greatest prizewinning herd of Hampshire swine in Canada, bred from the best strains of the breed. Stock of both sexes and all ages. HASTINGS BROS., Crosshill P.O., Lidwood Sta., C. P. R.; Newton Sta., G. T. R.

Elmwood Ohio Improved, Chester White pigs, largest strain, oldest established registered herd in Canada. Choice lot of young sows, bred; young pigs, 6 weeks to 6 months; pairs not akin. Express prepaid. Safe delivery guaranteed. E. D. GEORGE & SONS, Putnam, Ontario.

ELMHURST LARGE ENGLISH BERKSHIRES. Present offering: Select sows bred for spring farrow. Choice boars ready for service, also younger stock, the get of Duke of Somerset imp., and one of imported dams. Satisfaction and safe delivery guaranteed. H. M. VANDERLIP, Breeder and Importer CAINSVILLE P. O., Langford station, Brantford and Hamilton radial.

Duroc Jersey Swine. Thirty sows ready to breed; an exceptionally choice lot. A few boars fit for service. Also a lot of Embden geese. Phone in house. Mac Campbell & Sons, Northwood, Ont.

Improved Large Yorkshires FOR SALE. A lot of or fine young boars and sows of different ages. Full strength. Correspondence solicited. SENATOR F. L. BEIQUE, P.O. Box 106, Lachine Locks, Que.

Hampshire Pigs Get acquainted with the best bacon hog in existence. Both sexes for sale from imported stock. Write for prices. Long-distance phone. J. H. RUTHERFORD, Box 62, Caledon East, Ont.

Newcastle Tamworths and Cotswolds For sale: Choice young sows, bred and ready to breed; boars ready for service; beauties, 2 to 4 months old, by imp. boar, dam by Colwill's Choice, Canada's champion boar 1901, 2, 3 and 5. Several choice ram lambs and ewes, all ages, and one 3-shear ram. Prices right. Bell phone. A. A. COLWILL, NEWCASTLE, ONTARIO

Hilton Stock Farm Holsteins and Tamworths. Present offering: 6 yearling heifers and several younger ones. All very choice. Of Tamworths, pigs of all ages and both sexes; pairs not akin. R. O. MORROW & SON, Hilton, Ont. Brighton Tel. & Stn.

Monkland Yorkshires I am making a special offering of 50 young bred sows. They will average 200 pounds in weight, and are from 6 to 7 months of age. An exceptionally choice lot, full of type and quality; also a limited number of young boars. MATTHEW WILSON, FERGUS, ONTARIO

The Tamworths in Canada I have a particularly nice lot of young Tamworths just now of both sexes, from youngsters up to breeding age. If you want the best types of the breed, write me. HERBERT GERMAN, St George, Ont. Long-distance phone.

Morrison Tamworths Bred from the prize winning herds of England; choice stock for sale; also Shorthorns of the deep milking strain. CHAS. CURRIE, Morrison, Ontario

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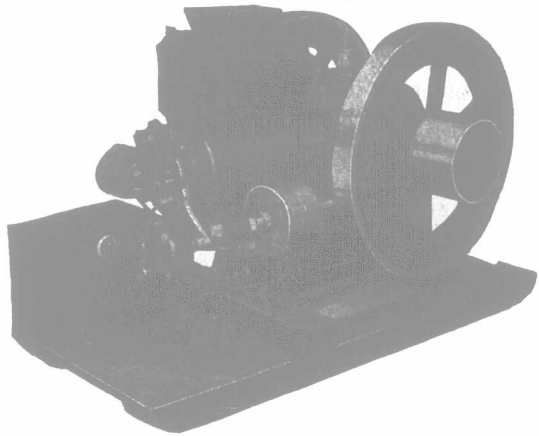
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The "Bissell" Roller is all steel except the Pole. It is braced and stayed to stand all kinds of hard work and wear well. The bottom of the frame is all steel too.

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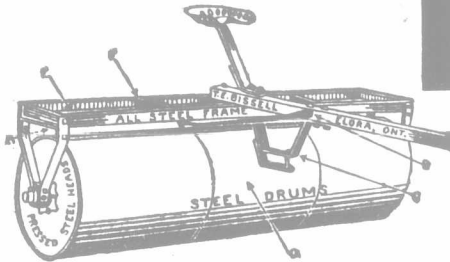
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The Cages holding the anti-friction rollers are the best yet; they're MADE OF MALLEABLE ALL IN ONE PIECE—no twisting or binding of the bearings on the axle of the "Bissell" Roller. The Seat Spring is reinforced and is DOUBLED AT THE HEEL.

These good features are not all of the advantages of the "Bissell" Roller. Many more good points are built into them, making a Land Roller that is "built for business," that stands up, against lots of hard work.

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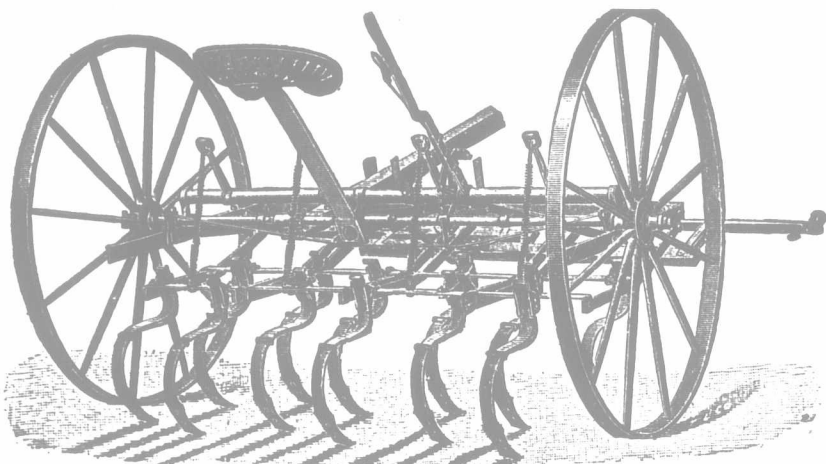
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We want you to examine the strong heavy steel frame of this cultivator, the spring teeth and helper spring, the reversible



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2-inch points, and the interchangeable 7-inch points. You will see how the "CHAMPION" is riveted at every possible point, built strongly, so you may use it for many years.

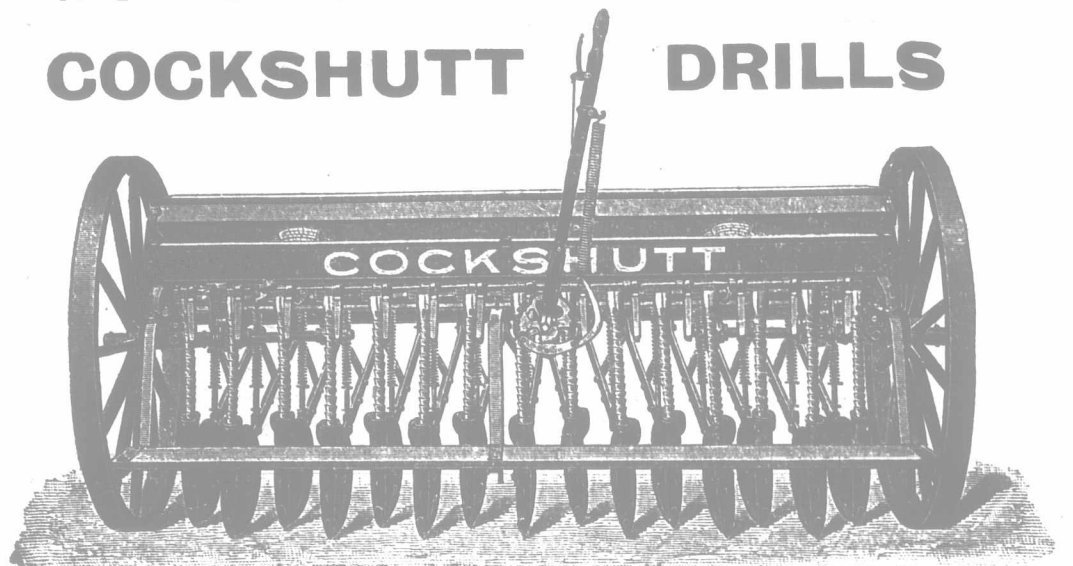
Examine it now. Start your 1912 harvest right. Use this Frost & Wood "CHAMPION" in spring, summer and fall. It is one of the best implements for plowed-land cultivating, but, remember, too, its high quality and light draft.

Write us to-day for our Cultivator circular. The Frost & Wood "CHAMPION" Cultivator is always a money-maker.

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Here is increased yield from three sources. You get decreased cost of sowing also. Your Cockshutt Disc Drill is well built. It gives long service. The feed device is protected against wear, and you cannot over-sow or stint the seed bed. The draft is light, and no interruptions in work are needed for clearing away trash. Learn more in the Seeder Book — sent free.

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ARE SELF-OILING
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WITH our Drill you'll save hours of time every year, because the discs are self-scraping and cleaning. This means more actual work done in a day with the Cockshutt Drill, and less strain on team and operator.

You cannot clog a Cockshutt Disc with trash. The space between grain boot and the disc widens from top to bottom, and every lump is automatically dropped instead of lodging around the disc.

Cockshutt Discs are self-oiling, having a dust-proof bearing connected with an oil reservoir. Oil only once a year, and get the light draft benefits all the time.

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