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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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DL. XLIV.

LONDON, ONTARIO, SEPTEMBER 2, 1909.

No. 884

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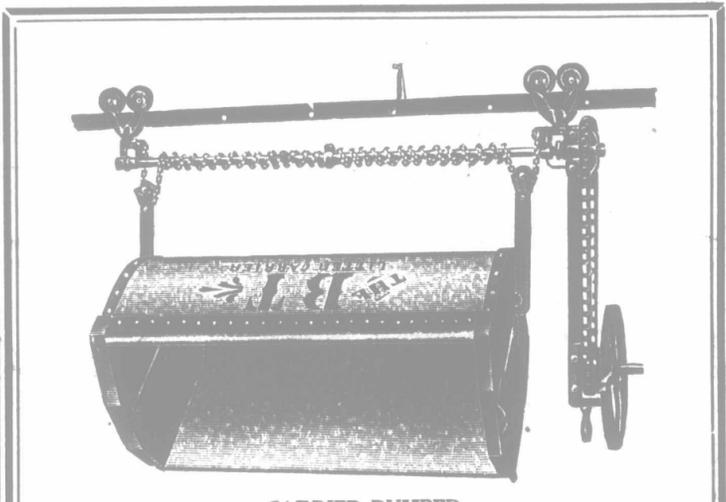
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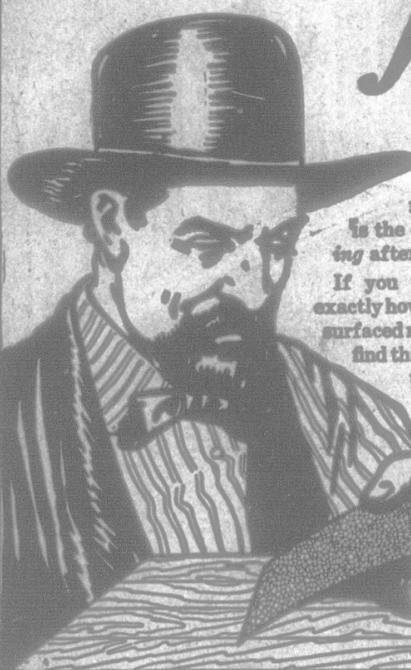
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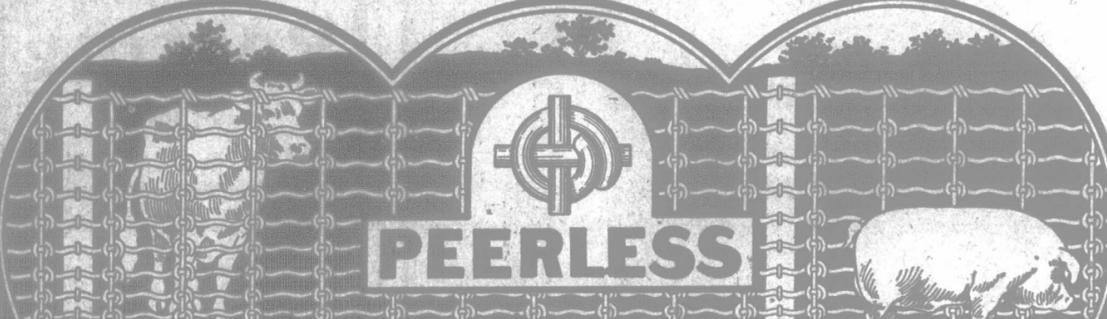
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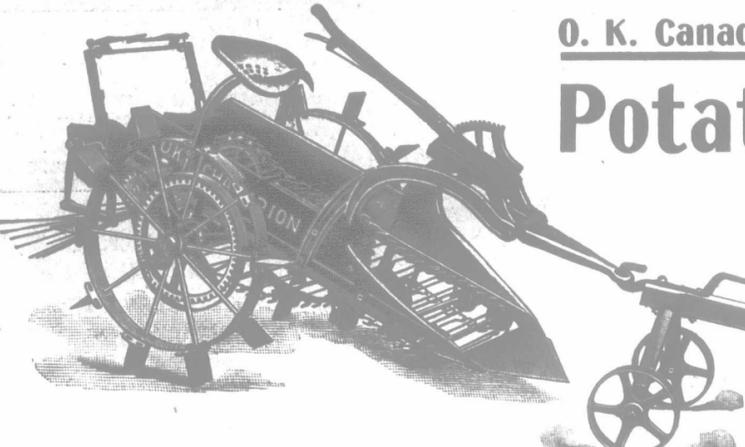
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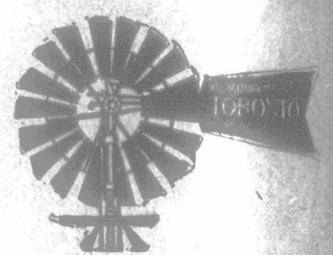
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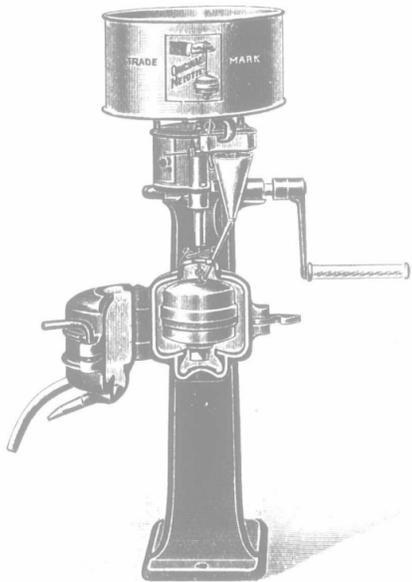
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Yours truly,
I. J. DAVIS,
(Signed) Folden's Corners, Ont.

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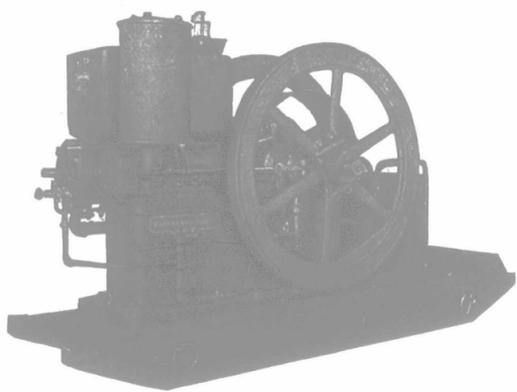
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**Toronto, Ont.,
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This cut shows how boulders are removed by using our new explosive.



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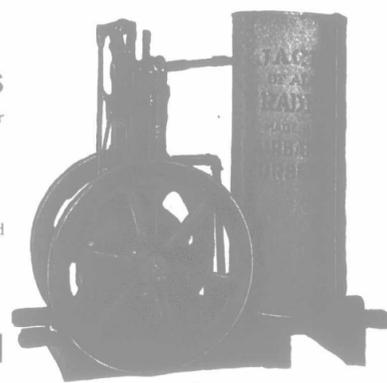
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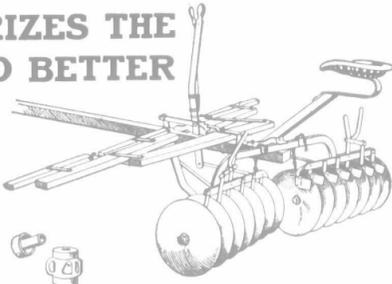
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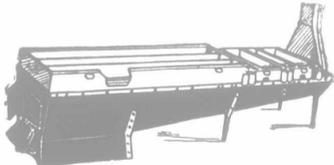


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Yes, indeed, the "Bissell" Disc Harrow is altogether superior. Our free booklet explains it in detail. Write for it now to Dept. W or ask your local dealer.

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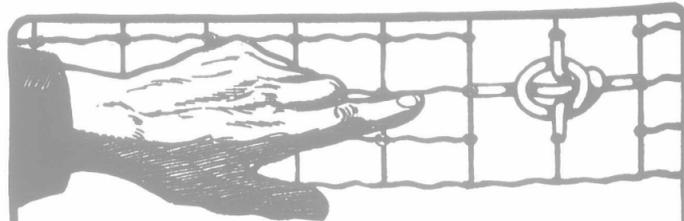
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The Farmer's Advocate

and Home Magazine

"Persevere and Succeed."

Established
1866.

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Vol. XLIV.

LONDON, ONTARIO, SEPTEMBER 2, 1909

No. 884

EDITORIAL

Some people watch the copper coins so narrowly that silver dollars roll past them unobserved.

No man has any business to hold opinions on matters concerning which science can throw the light of definite knowledge.

A cool-curing room will not always insure either a "lower" yield or a premium in price realized for the cheese, because its effect may be offset by other independent influences working in the opposite direction, but cool-curing tends towards both these desirable results.

"Never allow a colt to lose its colt flesh. Keep it going right along after weaning, especially up to the age of two years, and as long after as one possibly can, for there is no denying the fact that condition is more than half of the horse at any and all times." These words, by R. P. Stericker, the noted horse judge, should be laid well to heart by everyone who undertakes to raise a foal.

The agricultural community must view with misgivings the proposal to appoint a permanent tariff commission to investigate and advise concerning the levy of tariff imposts and their relation to the various industries affected. While an impartial commission of this kind might render useful service, would there not be danger of its becoming an ingenious instrument of higher protection, playing into the hands of aggressive self-seeking interests?

That means of killing the golden-egged goose which consists in going out of a line of stock husbandry because cost of feed is temporarily high, or prices for the product temporarily low, is not peculiar to the Canadian farmer. The Irish farmers of Ulster, it seems, discouraged by a dear potato crop (which is hog feed in Ireland) in 1907, and baited by extra high prices for pork in the late fall of that year, sold off their sows, still further diminishing their numbers in the spring of 1908. Thus, the Ulster hog-raisers reduced their sow stock by 9,504 head, and are now contributing a scant supply of pork when prices are temptingly high. Agriculture needs more men of faith—faith to persevere, when the courage of their neighbors plays out.

That the gentle, patient, seven-days-a-week dairy cow has done more to banish romance and sociability from country life than all other causes combined, is the sweeping indictment of an Oxford County correspondent. He puts it strong, but it must be admitted that where dairying is followed as an exclusive specialty, requiring regular nightly and morning attendance of the whole farm force, the chores do become too exacting for the interests of society, intellect, or even physical well-being. A reasonable number of cows are a pleasure to handle, but a farm where all the family and employees are tied constantly to the stable is not the kind to appeal to a well-balanced young man. Money making is not the noblest purpose in life, nor is bovine society a satisfactory substitute for that of fellow human beings. No Canadian farm should have so many cows that one or more members of the family may not conveniently remain away for a day, or several days. Otherwise the burden of duties becomes a depressing, deadening and narrowing routine.

Corn-cutting and Silo-filling.

Several letters have appeared in "The Farmer's Advocate" from men of experience, giving in some detail their methods of cutting the corn crop and filling the silo. Great changes have taken place in ideals and methods in regard to this work from what prevailed when silos first began to be used. In no respect is this more noticeable than in the stage of ripeness of the corn crop preferred. Instead of the immature, green stuff formerly thought to be most suitable for silage purposes, our correspondents are agreed that the grain ought to be fairly well glazed; in fact, just very little short of being ripe enough to cut for husking, before cutting for the silo should begin. If frost threatens, some would cut a little earlier than this, but most would run chances of a frost rather than of ensiling immature stuff. The opinion seems to prevail that even if corn leaves are frozen white the value of the product is not seriously impaired, but that cutting should not be long delayed after a frost, as the leaves and stalks then dry out rapidly, and there is danger of mouldy silage as a result, besides some waste of leaves. One correspondent would add water to frozen corn in the silo, but the majority depend on more firmly tramping it to prevent mouldiness.

The corn binder has taken the place of hand cutting in the field with almost all, on account of being quicker, easier, and of the greater speed in handling bound bundles, but some would prefer hand labor if help were available. One objects to the corn binder on account of its breaking off ears and leaving long stubble, and he uses in preference short-handled, heavy hoes, which do the neatest possible work. Five or six acres is reckoned a fair day's work for a binder. If corn is in hills, four or five men with hoes or sickles will accomplish as much, but where binders are used sowing in drills is commonly practiced. Cutting is generally done a day ahead of filling, on account of leaving greater freedom for teams hauling, and also because slight drying is an advantage.

The number of men and teams employed in hauling and filling depends on the distance that hauling has to be done, and also on the size and power of the cutting outfit. From three to five teams and drivers are usually engaged in hauling, about four men in the field to help load, one man to help unload, one at cutting-box, two distributing and tramping in silo, and the engineer. On the average the silo-filling gang consists of about 12 men, from 9 to 14 being given by the different correspondents as the number needed. Mr. Fixter, foreman Maedonald College Farm, uses a long, low platform, hung below axles of ordinary wagon as a corn rack, but a low-truck wagon with long, flat rack laid on bolsters is the more common style. To ensure ease in unloading, it is well to pile on the corn first at each end of rack and leave a space in the center unfilled.

Some report the whole cutting outfit, including corn binder, owned and operated by a company of farmers; a greater number, probably, engage one of the threshers of the neighborhood, to bring engine and cutting-box and fill the silo at a charge of about one dollar per hour. Corn binders are usually owned by one or more farmers, though in some instances they also are hired, a dollar per acre being the usual charge, the farmer supplying team and twine. One six-horse-power gasoline engine owned by a company of farmers is reported, but those almost universally used are ordinary thresher engines of from fourteen to twenty horse-power; size of cutting-box, with blower attachment, being in proportion to power of engine. From four and a half to eight acres per day, stored in silo, is given as the capacity

of cutting and blowing outfit, varying according to power used and weight of the crop.

The importance of thorough mixing and tramping of the cut corn as it drops into the silo is appreciated by all who have written. Two men, or in some instances three, are kept busy at this part of the work.

Most of the help needed for the strenuous work of silo filling is secured by changing work with neighbors, who also have silos to fill, though, if necessary, an extra man or two may be hired by the day.

The estimates of cost of putting good corn into the silo vary; farmers who do not place any value on team labor giving it as low as five and six dollars per acre, while Mr. Fixter, who counts in wages of team and possibly handles heavier crops, reckons the cost to be ten dollars. It will depend so much on distance to haul, weight of crop, excellence of machinery, etc., that close average estimates need not be expected. On one point there is complete agreement among the silo men; that is, they contrast the system they use as being not only cheaper than the old style of shocking and husking, but superior in every way.

Bridges and Culverts.

The article by W. A. McLean, Engineer of Highways for Ontario, on "Bridges," is worthy of careful reading, as it is written by one who not only holds official position, but who is also, thoroughly practical and well acquainted with all details of the work.

Of late concrete and steel have come into use in place of wood for bridge and culvert material, even in remote country districts. The rise in price of timber is mainly responsible. As the new materials are lasting and will show for years to come the ideas of the present day, the point is made that looks should be considered. An ugly structure will always be an eyesore, will cost as much as and be no stronger than one of pleasing design. This applies to the smallest culvert, and on through all the different sizes up to the massive span bridge.

Emphasis is also properly laid on having good materials, and on having these properly mixed. Clean sand and clean gravel, to be afterwards mixed, are much preferable to gravel in which there is an undetermined amount of fine sand. "The theory of concrete is that there should be enough of cement to fill the voids in the sand; and enough of the resulting mortar to fill the voids in the gravel or broken stone."

No discussion of the bridge question will enable inexperienced men, or even those with some experience, such as councillors, to draw up plans and specifications for bridges of steel and concrete. That is a matter for a competent engineer, and the services of one should always be secured before tenders are called for, and also afterwards during construction, to see that work is properly done.

The tendency has been, and is, to have culverts large enough for ordinary freshets, but scarcely capacious enough for the extraordinary ones which seem to be becoming more frequent. This is a great mistake. It is poor economy to have water rushing across the roadway and cutting gutters there, which a little more culvert room would have avoided. Another mistake of a similar kind is to have bridges merely strong enough for the traffic of to-day without taking into account that the increasing weight, resulting from the probable adoption of motor traffic, is likely to call for stronger structures in the near future. Where modern bridges are being erected, such as will

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

PUBLISHED WEEKLY BY
THE WILLIAM WELD COMPANY (LIMITED)

JOHN WELD, MANAGER

AGENTS FOR THE FARMER'S ADVOCATE AND HOME JOURNAL,
WINNIPEG, MAN.

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is published every Thursday.

It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairy-men, gardeners, stockmen and home-makers, of any publication in Canada.

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LONDON, CANADA.

likely last for many years, they ought to be of sufficient strength to carry a great deal more than anything likely to cross them at the present day.

Radical remedies are the only true remedies. All others are mere palliatives or expedients. By radical remedies is meant those which go to the root of a difficulty, correcting or extracting the cause. It is on this principle that Mr. Good argues the beneficence of single tax, even though in its working out it might entail some few apparent incongruities. For instance, the objection that single tax (which means tax on land values only) would touch lightly the rich man who built a palatial residence on a small parcel of land, while bearing harder on the poor man alongside, is met with the reply that single tax would tend to prevent the accumulation of "swollen fortunes," by discouraging the speculative holding of idle land, thereby handicapping industry to enrich the favored and the unscrupulous. Single tax would help to prevent one form of economic injustice which our present system of taxation endeavors feebly to mitigate; and prevention is generally better than cure.

Those who have stave silos should make it a point to go over them carefully, see that they are in good shape, draw up the hoops a little if it was not done in the spring, or loosen them a trifle if they are already so tight as to endanger bursting when the sap of the ensiled corn causes staves to swell. Defective staves should be displaced by others, and if the lower ends of the staves have decayed they should be sawn off evenly to ensure that the whole length of the stave may be sound and good.

Look at the date on the label of your "Farmer's Advocate" once in a while. Then you will know when it is time to renew your subscription

The Reward of Service.

No class of public servants in Canada have worked harder or to more effective purpose than the dairy instructors in the Province of Ontario. This is true alike of the chief instructors and of the local men working under their direction. Mr. Barr, and after him Mr. Hens, in the western portion of the Province, and Mr. Publow in the east, have rendered service that will never be fully appreciated, because its effects have been in large degree negative. Improvement in the factories, appliances and methods of making, in the location of farm milk stands and farm conditions—these are, in some instances, obvious enough, but the perplexities they have helped makers out of; the obscure sources of trouble they have ferreted out; the cuts in price avoided through their helpful guidance and practical work in the factories, and a large degree of betterment due to their patient, tactful, zealous effort, bulk up into a benefit which, could it be measured in dollars, would astonish us. The drives of sixty to ninety miles a day through a blazing summer sun, calling at a dozen factories or so; the chase from office to factories and factories to office; the loyal, conscientious, never-flagging efforts deserve more praise than will be ever bestowed. G. G. Publow has devoted to the dairy business of Eastern Ontario a degree of zeal, energy, principle and capacity that would have made him rich in agriculture or commerce. He is not rich in earthly possessions, because he has worked for a very modest salary, indeed. But if honest, effective public service is a reward, he is rich in the honor of his co-workers and fellow men; and that, after all, is a better reward.

The Fortunes of the Show-ring.

There is ever a zest in the fortunes of the show-ring. While to a casual visitor the arena may seem to contain the same or a similar aggregation of animals each year, to the connoisseur of the show-yard it is a game demanding rare skill, yet spiced with an element of chance, that renders conclusions tentative until the issues have been finally decided by the officiating judicial talent of the occasion. And right here, in the individuality of the judge, lies one of the factors of chance which makes the contest so interesting. The best beast does not always win, and while in the great majority of cases the placing of the top prize at least is such as to command the approbation of observers, it is not always so. Judges differ in their estimation of the relative value of points. A Scottish judge of draft horses, for instance, will probably lay great stress on the foundation, whereas the average American or Canadian would pay more attention to the superstructure, if the expression may be permitted. One judge of dairy cattle may attach greater importance to milk wells and veins and escutcheon, while another may give more attention to breed type, conformation, or the indications of constitution. In judging the beef breeds, one may be attracted by style, or what appeals to him as breed character, and another may be more impressed by a smooth and even covering of flesh, or by the handling quality of hide and hair.

The skill with which an animal is shown counts for much. To begin with, there is the condition and fit, and no less an authority than Mr. Stericker tells us that condition is over half the horse—that is, half the appearance he makes. Just how much avoirdupois, yet not too much, and how to attain that by the date of the show, is a problem calling for the exercise of nice judgment indeed.

The attendant must know his business, and know his beast. Deficiencies and tendencies to weakness must not be conspicuously presented by permitting an entry to stand out of form. In cattle, for instance, a lowered head levels up a slack back; again, if a beef bull carries his lines out level and parallel, it is only fair to see that the judge has a chance to obtain a good side view. The skill of the shepherd in trimming his sheep is a matter of common knowledge, and while it may not deceive an expert judge, it certainly does tend to produce a favorable first impression, which counts for something. The poultrymen have exhibited down to a fine art, with "their ways

that are dark and tricks that are vain." For example, if a cock's comb does not present the right number and modelling of serrations to conform to Standard requirements, it can be made over. A little thing like an imperfect comb seldom stands in the way of a premium. And so it goes.

Through it all there is an element of uncertainty that renders prejudgment unsafe, except in outstanding cases. The longer one attends the shows, and the more intimate his knowledge of what constitutes excellence in the respective breeds the more interested he becomes in the battles of the ring. It is an old story, withal ever new, because even with old players who have often entered the lists against each other there are the elements of fresh material, different judges, new attendants, and opportunity for unexpected scores and turning of the tables through perception and practice of the fine arts of the game.

Weed Robbers.

The phrase often used in speaking of children, "They are growing like weeds," voices the popular idea as to the thrift and vitality of these pests. Weeds are plants which, in the struggle for existence, have survived where others have perished. Being inured to hardship, they will cling to life under adverse conditions and reproduce their kind, but when conditions improve, as, for instance, on the cultivation and enrichment of ground they have occupied, the rapidity of their growth is amazing and disconcerting. The multitude and vitality of their seeds are such that wherever ground is unoccupied by useful crops, even for a short time, hosts of these intruders appear and take full possession. There seem to be varieties of weeds suited for every condition of soil, of climate, or of crop. Thus we have mustard and wild oats in spring grain; false flax, cockle and red root in fall wheat; dodder in clover and alfalfa fields; ox-eye daisy in grass lands; burdock, blue weed, yellow dock and the like in waste places, and multitudes of annuals ready to spring up in hoed crops and choke them. Many of our worst weeds are not particular as to conditions, but thrive almost anywhere that they have taken root, as witness Canada thistle, perennial sow-thistle and bindweed. On the other hand, nearly all of the useful farm crops, with the single exception, perhaps, of June grass (Kentucky blue grass), require specially favorable conditions in order to develop properly. They require the fostering care of the farmer, and without it would soon become extinct. Their power of extracting nutriment from the soil appears to be so much inferior to that possessed by weeds, that given an equal chance they are inevitably much weakened. The percentage of plant food that may be appropriated by weeds is probably much greater than we suppose. While they are comparatively valueless as food, some of them are richer in the three main plant-food elements of the soil than is a wheat crop, which is known to be exhaustive. The following table shows the pounds of these elements per ton of material, and the amount contained in an average acre of wheat:

	Phos.		
	Nitrogen.	Acid.	Potash.
	Lbs.	Lbs.	Lbs.
Wheat, 20 bush, with straw	35	20	35
Mustard (entire plant)	65	26	37
Wild oats	30	18	30

Where the whole crop is removed, as is the case in the Canadian West, it can be readily seen that soil impoverishment may be greater where grain has been light, owing to presence of weeds, than if a full yield of grain alone had been harvested. In the east, where the coarse products are retained on the farm, and afterwards returned to fields as manure, there would not be this loss of fertility, but the diversion of valuable food elements from the useful to the useless is pure waste, so far as the current season is concerned. It would not be right to say that this waste is increasing, for, in spite of the increasing number of weeds, farms in general are cleaner than they were, but the loss is certainly enormous. So long as grain fields can be seen yellow with mustard, or meadows white with daisy; so long as corn fields with inter-crops of various weeds breast-high can be noted anywhere, so long, at least, should the fight against these soil robbers be maintained and intensified.

A Three-stranded Cord.

The power for good in the world of the British Empire is not just what she is to-day in ideals, morals, statesmanship, scholarship, trade, commerce, finance, naval or military prowess, but the sum total of all that she is and has been. Prestige, influence, accumulate like interest on capital invested. Momentum sustains speed. The arm acquires strength and the hand skill by usage. Experience is the best of teachers, the phrase-maker tells us. "We learn to do by doing" is the maxim of the modern schoolmaster. Farming is a product of the teaching of the years. Success, reverse, change—all shed some light on the farm work of 1909. Yesterday's knowledge is applied under the conditions of to-day. In 1866—some 43 years ago—"The Farmer's Advocate and Home Magazine" set out to record, honestly, the teaching of experience on the farm with a simple motto, "Persevere and Succeed." The skill of the breeder, the feeder, the soil tiller, the dairyman, the orchardist, the gardener, the beekeeper, the home maker, the student, the investigator—all have gone into the make-up of its pages. Everywhere and always it has sought to ally itself with the best, without fear or favor. Identifying itself with the toil and advancement of the farm, it has become in a unique sense a part and parcel of Canadian agriculture and farm life. It has observed the wilderness become a garden and a world granary. It is difficult to put any adequate estimate upon the cumulative value of over 40 years' acquaintance and alliance with the earnest intelligence of the farms of a country like Canada. But enough to say that the readers and the advertisers of the present week benefit by the gathering interest and influence of all the re-interpreted capital knowledge of the past. Seeking to live to its name and motto, and standing for quality, the paper did not misjudge its constituency, and has been heartened by a steady and ever-widening circle of prospering readers. From monthly to semi-monthly, and from semi-monthly to weekly, "The Farmer's Advocate" has been a growth of years from strength to strength. In some measure it has been its privilege to share in the enhancement of the discriminating, purchasing power of the farms and farm homes of the great Dominion, a fact which the advertiser who aims to cater to the best is not slow to discern. And thus reader, advertiser and those who build the paper are mutually advantaged in a trinity of 43 years' accumulating influence and trust. These be the days of co-operation, but there is no co-operation like the co-operation of intelligence.

A Glimpse of Country Life in Britain.

Riding north from Liverpool in June over the Midland Railway, with the panorama of hill and valley, river and forest unfolding mile by mile and ever changing as we sped along, a feeling of intense satisfaction, almost of relief, came over me at the view of it, for there is a restfulness in the fields of England, almost indescribable, and yet felt and appreciated, perhaps even by those not born to a love of the country. A thought of the work of the Country-life Commission sprang to my mind, not so much in reference to the preservation of our natural resources, but rather as touching the amelioration of rural conditions, for the reason that British agriculture challenges study and yields food for thought to all those interested in the economics of farm life in either a physical or ethical sense. And the superficial view is borne out by more intimate knowledge. True, we may hesitate somewhat at the system of land tenure, and our Canadian independence may be somewhat startled at the distinction of class relationship as it exists between master and man and between landlord and tenant, but there is a comfort in the country here that we have yet to know in Canada. And it is a comfort not of indolence or ignorance, but of a large degree of prosperity and of social and physical well-being. The land is tilled and farmed as perhaps nowhere else in the world, the resources of the ground are husbanded and stimulated in a masterly way, the flocks and herds know of no better management in any country, and the business operations are conducted in as shrewd a fashion as to make bargaining almost a science. This latter is, perhaps, particularly true in the north country. There are, indeed, neglected farms, but such pass sooner or later out of the hands of incapable occupants, for rents must be made up, and shiftless management speedily loses ground before the continuous competition that exists for the best holdings. Such men, of necessity, must

either give over farming for themselves or move into more backward districts or on to poorer land. Even here competition does not cease, and far up the hillsides, hedges or stone dykes enclose the last foot of soil that will yield at best a grudging return, and under such conditions many a good living is made, even though it be a hard one. The thrift of an upland farm is proverbial.

The landlords are, I think, on the whole, just, and in many cases very considerate, but a shiftless tenant in the end finds his lot a hard one. He does not retain long the respect even of his neighbors, and he soon passes out of the system, and, as I said, must needs find his level elsewhere. Rents, while varying, of course, with the quality of the land, are moderately uniform throughout a countryside, and as holdings, to some extent, at least, are always in the market at the termination of a lease, they are never uniformly low. The lease is frequently for five years, and a pound an acre is, perhaps, an average rent. On the best land, however, it will run up to thirty and forty



A Home in the Border Country, near Greta Green.

shillings an acre, while in poorer districts it may run down to ten. The cost of rent, labor, manures and feed on the larger and better holdings sometimes amounts to a very large sum. Much more I should say is expended on an acre of land each year as invested capital than in Canada, and the returns are consequently and proportionately greater. The demand then on the farmer continues from year to year, and the intelligence and insight required and exhibited has left its mark indelibly stamped both upon the people and the land.

Further, they have learned how to work. As boys they grow up with a knowledge of the stockmen's art. I remember two lads in Ayrshire, and neither of them could have been more than twelve years old, and yet they led their charges out of their boxes with all the pride and skill and care that would have done credit to veterans of sixty years. A beast in the show-ring is not to be despised because a youngster of eight years has hold of the halter. At one of the dairy farms an old lady of seventy, the wife of the master himself, goes out morning and evening to the byre and milks her cows with the rest, and only regrets the day when age makes her less able to follow her usual custom. And work has not hardened her spirit, for her husband courts her now even as in their youth. Of her daughter, too, I should speak. Few men know better how to work. Her hands and arms are as hard and strong as her father's. For milking she clothed herself as any Ayrshire maid, in clogs, short skirts, apron and homely dress, and the hired men could not keep pace with her down the long line of cows. When it was over, as we all pre-

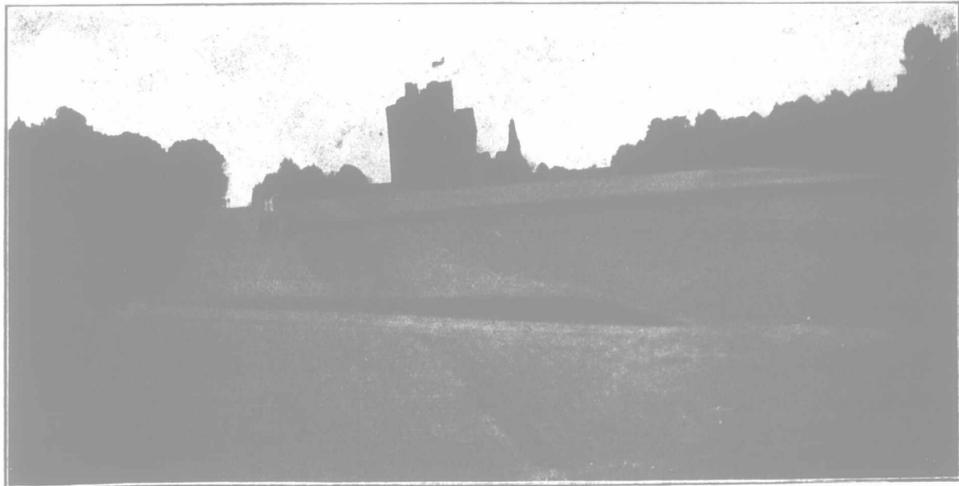
pared for a drive to the hills, she appeared in a few short minutes in comely maiden's garb and with the charm of health and pride of accomplishment upon her as might awaken the envy of many of her more gently-bred sisters. But her father had a character of his own. He started in his youth as a hired plowman, without capital, and now through industry, able management and hard work, he has gathered many farms into his own and his children's hands.

Let me give one further instance. It was in the south where I saw a young lad of not more than twenty or twenty-one in charge of all the men on his father's farm, which consisted of something like 2,200 acres. He was altogether unassuming, and his way was very quiet, but after counsel with his father in the morning he fixed his plan of work for the day, and it became his business to carry it through. The men liked him, and I was impressed with his successful control of all the farm operations. More I might say of the masters themselves, but not now. What they have done and what they are remains as a tribute to the country that bred and reared them.

Besides the labor that bespeaks accomplishment, perhaps every stranger and visitor remarks that the country people of Britain find time for leisure and recreation. Perhaps it is that the growing season is longer, and the work, therefore, not so crowded; it may be that there are more hands to do the same work; but whatever the reason, the consciences of people do not seem to be always so troubled as they are in America; there is more of a finished appearance about the fields, lanes, fences and buildings, and time is forthcoming now and again for a holiday. I don't know how they do it, but while the hurry of getting through is less often upon them, the work of the fields usually appears to be well forward, the odds and ends well in hand, and they find spare time very occasionally for recreation and pleasure, and through this there has become interwoven a wholesome content into the life of the country that is as tonic in its effect as the air of the seaside. The workmen have fixed hours as a rule, and the long evenings give them opportunity to become their own masters for a time of the day at least. The farmers regularly attend market once a week, and as thoroughly enjoy their half-holiday as their sons do their occasional evening or afternoon games of cricket or football. The farmers' wives take much satisfaction out of their flower gardens, and their daughters out of their cycling parties and tennis. An English lawn, with its flowers and its grass, is always a delight to the eye. Then, again, the tenant has usually the right of ground game, and I remember a morning in Gloucestershire when we were up before five o'clock and went out rabbiting, and had as much keen enjoyment for an hour or two as could well be wished. In all such ways is made possible the gathering together of the people of the country districts and their association in common interests, and thus there grows up the society of country life.

For the most part the workmen are comfortable. They have their homes either near to each other on the farms or else in villages close by. The cottages are built by the landlord of the estate, and the farm hands occupy them as part of the compensation for their labor. The tenant of the farm, in having the comfort of his hired help thus provided for, finds it no hardship to make return in his rent against the cost and upkeep of these cottages. The houses are small but substantial, and as the working class are content with rather few luxuries and live simply, there is much happiness amongst them.

They work cheaply—two shillings, two shillings and sixpence and three shillings a day are average wages. Sometimes work is allotted by the piece, and then from three to four shillings may



Ruins of an Old Castle in a Nobleman's Lawn, County of Wigton, Scotland.

be earned, and I have heard it stated that very frequently the four-shilling man makes a larger net return to the farmer than the one receiving only two shillings. The better class of labor is, as it were, born in the harness, and grows up with the work. Laborers from the town, and such as vary their occupation, are of a somewhat unsettled type, and are less satisfactory. It is not an infrequent thing for men to remain twenty, twenty-five and thirty years with the same master, and as they grow old their children are growing up to serve their master's sons.

Besides his wage and his cottage, a workman usually has the use of a small parcel of ground which serves as a garden. Sometimes this is attached to the cottages, but very frequently a piece of ground is set apart for laborers and villagers, in which each receives his share. Such tracts of ground divided in this way are known as allotments. In the cool of the evening the men and women may be seen out working upon these small farms, and it is surprising the amount of produce that is grown upon some of them. This feature has seemed to me to contribute very largely to the contentment of the working people, and to a satisfaction in their position. It gives them an independence that they would otherwise lack, and at the same time provides them in a comfortable way with a great many household necessities.

For the bona-fide squires and landowners the people have for the most part a large respect and affection, for they have as thorough a knowledge of the land as many of their men, and have its interest as much at heart. Here and there, however, the land has passed out of the possession of its original owners into the hands of wealthy capitalists from the towns, who have in many instances with wilful intent enclosed it out of cultivation, thrown all the farms into one, scattered the tenants, and made of it a private pleasure park for themselves. I was in one such district, and a countryside that had once been peopled with an honest, thrifty folk had become almost an agricultural waste, and barren of fruitfulness either in produce or in human life. The landscape was such as to gladden the heart of any lover of rural scenery, but there was a melancholy pathos in the view of it. For a country to be prosperous the land must belong to the people and never to a man. To the honor of the nobility, be it said, that while they have owned the land they have kept it in the possession of the people, and so have served a faithful stewardship. It will be a pity if wealth is permitted to usurp an ancient heritage. But I do not think it will be so. The people are finding representatives whose speech is as fearless as their work is honest. The laboring classes and the country people have had their own burdens to bear in this and other lands, but the day of their deliverance is at hand. The arrogance of wealth and of commercial organization has too frequently worked toward the restraint and oppression of their less able competitors, but England is now leading in the fight toward the emancipation of those who work. I would that I could impart the spirit of it, for this also is a factor of influence in rural life. But this subject raises another question. We shall close, with the atmosphere of the fields about us and the delight of the landscape in our thought.

Macdonald College, Que. H. S. ARKELL.

Taxation of Land Values.—III.

In England the demand for reform is even more urgent than in America. There a landed gentry, with a numerous following of satellites and dependents, once granted legal title to the land, is maintained in luxury by exacting rent for the use of this land; and not infrequently has been seen in that otherwise favored nation the astounding spectacle of people dying from starvation while land is lying idle. A "single tax" on land values will force land into use by making its "owners" contribute to the public treasury as much for the mere holding of land as for the using of it; and in England, for instance, we shall not be so likely to hear of pheasants living so many brace to the acre while human beings are counted so many brace to the garret.

Undeniably the general philosophy of the "Single Tax" is sound; but when it comes to apply it to conditions as they exist, there arise a number of perplexing questions and "objections." Some of these should be here mentioned and discussed.

It is said, for instance, that there is no real distinction between the values created by the individual and those created by the community; that the individual is a social product, his powers all developed by the social environment, and that, consequently, all values are social and not individual. In a sense this is true, and ultimately nothing is logically equitable but absolute and universal communism. But, meanwhile, we must necessarily get along with convenient distinctions, even if these are not quite logical; and there is a sufficient distinction between the value of the wheat crop that I grow, even though I have received instructions as to how to grow it from others, and have a binder to harvest it which is quite a complicated social product,—there is, I

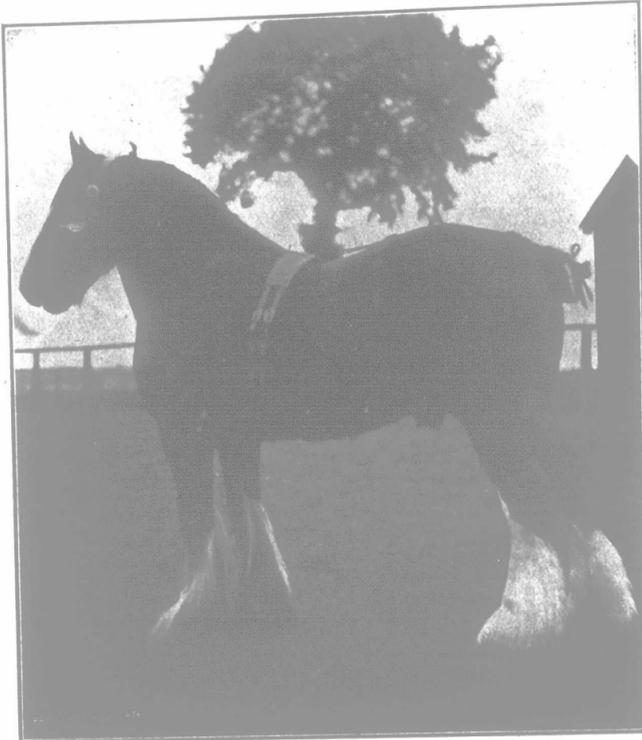
say, a sufficient distinction between this value and that which attaches to my land by reason of its original quality, its proximity to markets and good roads, and so forth, to warrant quite a difference in the incidence of taxation. For all practical purposes at the present time, whatever may be the case in the remote future, the distinction which the "Single Taxer" makes between individual and social values is a real one.

Secondly, it is objected that the "Single Tax" does not propose to get after the "rich" man who buys a small parcel of land and builds a palatial residence thereon. Surely such a man should pay higher taxes than his poor neighbor, who lives in

sands to which he is not morally entitled, for the sake of getting a few paltry dollars in taxes upon his place of abode? The feeling that the "rich" man should pay more than the poor man is right enough; but let him build his house unmolested, and let us see to it that his chances of pocketing thousands of dollars without earning them are reduced. Then there will not be so many palatial residences to excite the public's cupidity. To refuse to reform our methods of taxation because, in such a case as I have cited, we think that "rich" man ought to pay taxes on his house, is to shut the stable door after the horse is stolen. To be sure he ought to pay extra taxes: not on his house, however, but on the thousands of acres of Western prairie that he has grabbed. That's where he should be "got after."

Again, it is asked: "How shall we assess land value apart from improvements?" Admitting the fact that all assessments are only approximations, and some of them not very close ones, there is no serious difficulty. In Ontario at the present time machinery and live stock are exempted, and real estate is assessed for municipal purposes under two headings: (1) Land and (2) buildings thereon. It only remains to exempt the buildings from taxation, and to make some effort to estimate the value of the other improvements; or, working from the other end, to try to assess the land value as a natural resource or opportunity, and the thing is accomplished. There is no difficulty in assessing for a "single tax" on land values which does not already exist. Such as there are must be got over as well as may be.

Another point, unfortunately, needs to be mentioned. Some farmers are seriously frightened lest, under a Single Tax, the onus of supplying the public revenue fall almost entirely upon their already overburdened shoulders. Of course, there is no valid reason for this complete misconception; it probably arises from a hasty mental confusion of land values with land acreage; and yet, despite all assurances and estimates to the contrary, it is hard to make some believe that the result of a single tax on land values would be to actually relieve the farmer. I have not the figures at hand just now, but I have seen careful estimates to show that the exemption of improvements from taxation will result in no increased burden upon rural property. Of course, in municipalities which are wholly rural, a single tax on land values will mean merely a change in the distribution of taxation; but in mixed communities the burden will fall more heavily than now upon those localities which have been made valuable by common effort. This refers, of course,

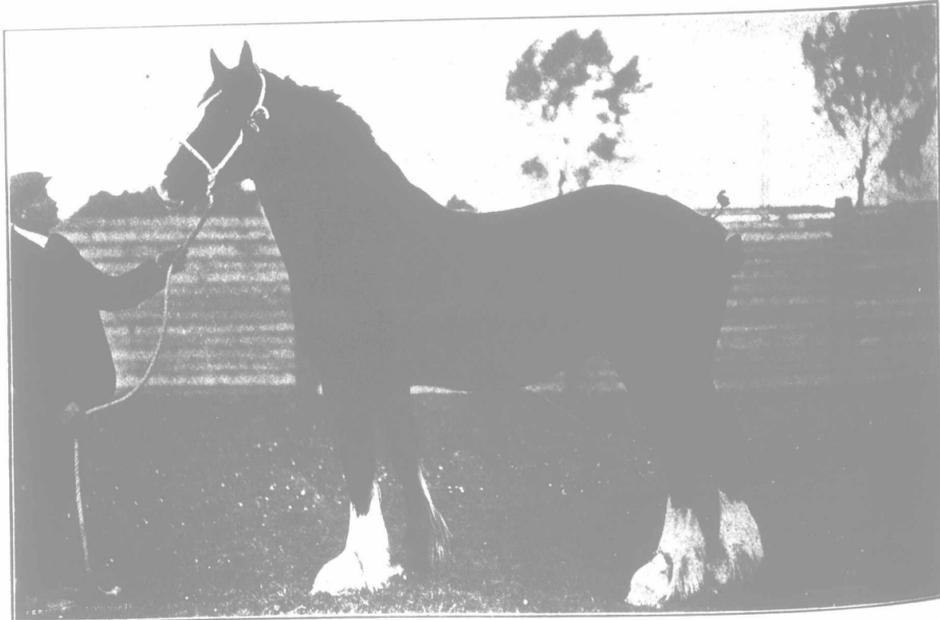


King's Sort.

Shire stallion. Bay; foaled 1907. First and champion, Bath and West Show, 1909. Sire Lockinge Forest King.

a modest cottage and "works out" at a dollar a day! This argument seems plausible enough at first glance, and is, moreover, confirmed by the very natural desire to get the "rich" man to "hand over." But those who argue in this way forget that in all probability the "rich" man got rich through some species of land monopoly, and that to leave matters as they are, because of an apparent injustice in a special case, is to leave the whole source of the trouble untouched. Perchance, the "rich" man attained his present envied position through some lucky venture in Western lands, or in Cobalt mines! Shall we allow him to levy huge tribute upon the Western farmers or upon the citizens of Ontario, and to pocket thou-

land values with land acreage; and yet, despite all assurances and estimates to the contrary, it is hard to make some believe that the result of a single tax on land values would be to actually relieve the farmer. I have not the figures at hand just now, but I have seen careful estimates to show that the exemption of improvements from taxation will result in no increased burden upon rural property. Of course, in municipalities which are wholly rural, a single tax on land values will mean merely a change in the distribution of taxation; but in mixed communities the burden will fall more heavily than now upon those localities which have been made valuable by common effort. This refers, of course,



Nerissa.

Clydesdale filly, 3 years old. First and champion, Highland Society's Show, Stirling, 1909.

to municipal taxation alone. In cities, where land values are relatively very high, such a readjustment as is advocated by the "Single Taxer" would be of more consequence than in the country districts, for there land-hunger is keenest.

Ultimately, one hopes that the taxation of land values will provide a way for the abolition of tariffs, and with it the policy of protection, which is so burdensome to the Canadian farmer. When a direct tax upon land values, the exploitation of State forests and mineral lands, and the taxation of public-service corporations, shall provide a revenue for municipal, Provincial and Federal purposes, then there will be no need for revenue tariffs, which are wholly taxes upon industry, and with their disappearance will go also the wasteful and unfair policy of protection. Doubtless it will be a long time before such a condition arrives; but every effort towards the exemption of improvements and industry from taxation will be a step in that direction, and there is no reason why the "next step" should not be taken at any time.

The recognition and establishment of equity in our public life, and the conforming of our social institutions and national policies thereto is not merely a counsel of perfection, but it is a law which must be obeyed if we are to secure the blessings of Abundance and Peace. W. C. GOOD.

Civilization Based on the Soil.

"Both the rise and the decline of nations are governed by the same law of nature. The deprivation of the soil of its conditions of fruitfulness brings about their decline, while the maintenance of such conditions leads to their permanence, prosperity and power.

"The nation is not fed by peace nor destroyed by war; these conditions only exercise a temporary influence on it. It is the soil, on which man builds his home, which is instrumental in holding society together or dispersing it, and in causing nations and empires to disappear or to become powerful."—Liebig.

HORSES.

Doctors Differ re Colic Treatment.

Editor "The Farmer's Advocate":

Would like to call the attention of the many readers of your valuable paper to that piece entitled "Common Colics," written by Dr. J. F. Cottrill, in your issue of July 22nd. We find he has given us some very useful and interesting points. Yet, I would like to refer you back to the last paragraph which he has written on Flatulent Colic. What does he say: "Meanwhile, remember that the intestines are inflated with gas, and if the horse throws himself violently to the ground, he may even rupture the swollen bowels." Then, listen what he says: "It is good to give him some exercise."

Probably, Dr. Cottrill has reference entirely to the Western horses (bronchos), which most of us horsemen know, when they are in their natural state, it is very hard to keep quiet; yet, when one comes to deal with the Clydesdales, such as are found in Oxford County, Ont., the best and most energetic care and treatment is none too good. It is well known that the horse is next to man in this world, as far as intellectual power is concerned, and I am quite safe in saying that lots of men are their inferiors; yet, in dealing with them, should not their intellectual power be taken into consideration?

Those of us who have had flatulent colic, combined with acute pain, like to keep as quiet as possible. How would we like it if the doctor came along, and got after us with a whip, and made us travel around? I think most of us would tell him in very few words what we thought of him. But Dr. Cottrill advises us to make the poor dumb animal, at this stage, walk around, which cannot help causing a greater fermentation of the stomach and bowels, until they become so much distended with gas as to cause a rupture, if not relieved in some other way.

Since first reading Dr. Cottrill's letter, I have had the privilege of treating two cases of flatulent colic. When I arrived at my client's barn, I found a boy leading the horse, and the owner after him with a whip. I told him not to abuse the horse like that. He said he read a piece entitled, "Common Colics," in "The Farmer's Advocate," written by Dr. Cottrill, who advises exercise in such cases. In the second case, the owner did not think exercise was profitable in such cases, and upon my arrival, asked my opinion regarding it, and I said he was correct.

Dr. Cottrill's medicinal treatment for such cases can scarcely be improved upon, but those of us who are in the profession know from experience that the ease and comfortable surroundings have a vast influence upon recovery of such cases. The manner in which I treat such cases is to turn the patient into a roomy, well-ventilated, loose box, and let him roll around at his leisure. If

bloating is very extensive, relieve him with the trocar and canula. The farmer, as a rule, does not have such instruments, but a nice clean penknife will do very well. Puncture him at the most distended part, on the right side of the horse, and on the left side of the ox. The horse cannot talk, but actions will speak just as loudly as words; therefore, let him roll around as he sees fit. Do not abuse the poor creature by making him stay on his feet, or by making him walk around. You would be far better away from him entirely than to do such like. He will soon find the position where he can get the most ease.

Therefore, let me say to you, one and all, in closing, if any of your dumb animals become sick in any way, just fancy yourself suffering in the same way, and use him the same as you would like to be used, and you will find that things will turn out far more satisfactorily, both for your animals, yourself, and your veterinarian.

Oxford Co., Ont. (DR.) H. B. ATKINSON.

held post-mortem examinations. Notice that I said "may"; I did not say "would." The risk is there, but not the certainty. And since the risk is there, I advised that the horse be not allowed to throw himself down and take the chance of encountering the fatal sequel mentioned. If we could be sure that he would go down gently, and roll, perhaps there might be little risk. But can we? Your readers, as practical men, know that the intense agony causes the animal to violently throw himself down. He cannot help it. The next sentence to offend my critic is, "It is good to give him some exercise." Yes, it is. Nature herself teaches the horse to do this by rolling; but, as I have just said, nature allows the horse to run a tremendous risk first.

I said "exercise." I did not say anything about a whip being used. Yet, Dr. Atkinson practically conveys the idea to your readers that I advocated the use of a whip.

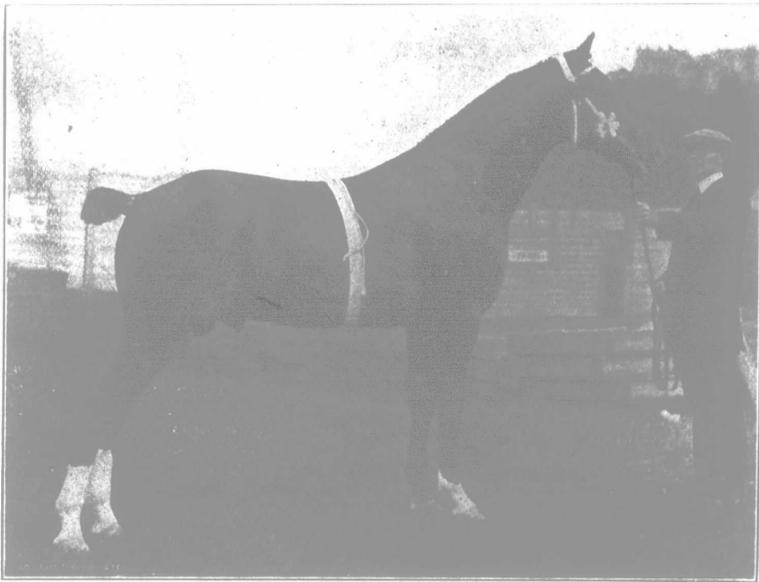
Is this fair criticism?

If Dr. Atkinson is so poor a horseman that he cannot exercise a horse at a walk, surely I am not to blame; and if the horse, after walking around for a time, gently goes down and rolls, I am not aware that any great harm is done. In a few seconds the intensity of the physical agony may have passed away, or become so mitigated, that the horse will rise, and we may then continue our exercise. Where is the cruelty? Where is the whip? Neither is present. I did not forbid rolling; I mentioned the violent throwing, not the rolling.

However, Dr. Atkinson objects to the gentle exercise, but allows the horse to dash itself violently to the ground in a loose box. I will say

nothing of the cruelty of this, the swollen, blood-shot eyes which result, the loss of great patches of skin or hair which follow, the bruises and pain which are borne without a murmur. No, I won't mention those things, but will ask this question, is not this dashing-about, exercise of a most strenuous kind? We must not use gentle means, but we may allow it to use the most violent means. Surely this is a case of swallowing a camel and straining at a gnat.

In my article, I said I used a trocar and canula in such cases among my patients, but I did not recommend a farmer to do this, for the simple reason that not one in a thousand has such an instrument. I am a surgeon, and am supposed to know more of anatomy than the average farmer, but I would certainly refuse to follow my critic's advice, and use a penknife, because I



International.

Champion Hackney stallion, Highland Show, 1909.

REPLY BY DR. COTTRILL.

My attention has just been drawn to a letter, signed by a Dr. Atkinson, in which my article upon "Common Colics" is referred to. He begins by gently patting me on the back, by such sentences as, "We find he has given us some very useful and interesting points," and later on he says, "Dr. Cottrill's medicinal treatment for such cases can scarcely be improved upon." Then he comes down heavily upon me. He evidently objects to my sentence, "Meanwhile, remember that the intestines are inflated with gas, and if the horse throws himself violently to the ground he may even rupture the swollen bowels."

Certainly, I said so, and repeat it here as being absolutely correct. It is believed in by all educated veterinarians. I have personally found such ruptures to have taken place, when I have



Sudbourne Surprise.

Suffolk mare. First in class at Royal Show, 1909.

should release but very little gas. The little I did release would change the relative positions of the surgical openings made in the walls of the abdomen and the intestines, and it would then be a physical impossibility for the rest to be liberated. But food and liquid could readily pass from the abdominal viscera into the abdominal cavity itself, and the result would be a case of peritonitis (or inflammation of the lining of the abdomen), and most probably death. Keep your knife in your pocket, my friends, for I would like to make a bet that Dr. Atkinson never has used, and never will use his penknife for the purpose of puncturing a horse suffering from flatulent colic. I have given one reason. Here is another, but keep it secret, please. The blade of the average penknife is about 1½ inches long. The length of the trocar and canula used for this purpose is over 4 inches long. Draw your own conclusions!

The reference to the puncture of the ox is outside the question. I was writing about pain caused by gas in the cœcum, or colon, or both, of the horse. Dr. Atkinson here refers to a disease of the cow's stomach, paunch, or rumen. What the connection is, I fail to see. But I imagine that someone's knowledge of anatomy has become hazy. The colon, the common seat of flatulent colic in the horse, has no connection with the stomach or rumen, the seat of a different disease in the ox, though both diseases are due to the excessive formation of gas, the result of fermentation.

Dr. Atkinson comes another "cropper" here. He talks of "greater fermentation of the stomach and bowels." I am sure he will pardon me if I say that his physiology is as misty as his anatomy, because the stomach and bowels do not ferment. I was taught that this fermentation was due mainly to the action of bacteria upon the partially-digested food, aided greatly by the warmth and moisture present in the organs containing them, but that these organs took no other part in this than in acting as the receptacles containing these bodies and their products.

Another gem of Dr. Atkinson's is this: "They (the bronchos) are very hard to keep quiet" (when they have colic, I believe he means). True, they are. But, from his next sentence we are led to assume that the Clydesdales, such as are found in Oxford County, do not so misbehave, when they have colic. Good old Clydes! That's another recommendation for you!

Then, again, he says: "It is well known that the horse is next to man, as far as intellectual power is concerned." Some people, among them the present writer, put the dog next to man. Take one example, say, the Scotch collie managing a flock of sheep on their native hills during a blinding snow storm.

I would like to strongly recommend your readers to read my article again, and to follow it exactly:

1. Stop the formation of gas by giving the medicines I prescribed.

2. Get rid of the gas already formed by (a) enemata or injections of warm water, (b) by gentle walking exercise (no whip, Doctor, please; it is rarely or never required). Both a and b are to increase the peristaltic action of the bowels, which result in the gas being expelled from nature's own opening, and by nature's own method.

N. B.—Next time your readers take a journey with a horse, let them count the number of times the horse obeys the calls of nature and passes excreta. Then let them count the number of times the same action takes place when at rest in a stable, and see if exercise does not increase this frequency.

3. Do not allow the horse to throw himself down in agony, with such violence that he runs the risk of injuring himself.

4. If you have a trocar and canula, and know how and where to use them, do not hesitate for a moment, but do not on any account use a penknife on a horse, because it is almost certain death.

In conclusion, Mr. Editor, allow me to thank you for the opportunity of replying to my critic. Let me once more assure you that I have no "axe to grind," and no clients to curry favor from. I write simply and solely to aid your readers, and I know from practical experience that my advice is sound. JAMES FIELDING COTTRILL.

Saskatchewan.

COMMENT BY THE EDITOR.

When doctors differ, whom is the layman to follow? The fear of confusing our readers, at most restrained us from publishing the above correspondence. On reconsideration, it was decided to let the veterinarians thresh it out, as "The Farmer's Advocate" is open to the expression of all shades of opinion, and especially to the relation of all phases of experience by veterinarian as well as stockman. Fuller light is thrown on almost every problem by discussion and experience. To Dr. Atkinson we are obliged for his courteous and suggestive contribution. In part he is correct. Dr. Cottrill's statement that

a horse which is badly bloated may cause rupture of the intestine by violently throwing himself down is certainly correct. At the same time, it is often not possible to keep the patient on his feet, though Dr. Cottrill's advice to keep him up by giving him exercise will in some cases be feasible. Our veterinary editor agrees with Dr. Atkinson in not advising forced exercise in such cases, and in his own practice never allows it when present. At the same time, it does not cause the increased agony spoken of, and, in view of the common popular opinion that exercise is beneficial, he hardly considered it worth contradicting when

relieve bloating of the ox often gives good results, but in such cases the rumen, or first stomach, or paunch, is punctured, while in the horse it is the part of the large intestine called the colon that is punctured, and it requires a small trocar and canula for the operation, which should never be performed except by a man well versed in anatomy.

To Improve the Art of Driving.

The reports of auction sales prove beyond doubt that the horse is still in demand, in spite of predictions as to how soon the "horseless age" is to arrive. It stands to reason that, as long as automobiles keep breaking down on the road, we will need the draft horse to draw the machines to the repair shop; and, while they are being overhauled there, their owners will need the road horse to drive. The draft horse is also very much in evidence. Does this useful animal not deserve better attention from his driver than he usually receives?

The driver is the man who controls the motion of his horse. He does this by word of mouth, by movement of reins and bit, and also by the whip. This last article may be needed at times with any horse; therefore, its use (not the misuse usually made of



Shetland Stallion, Thoreau.

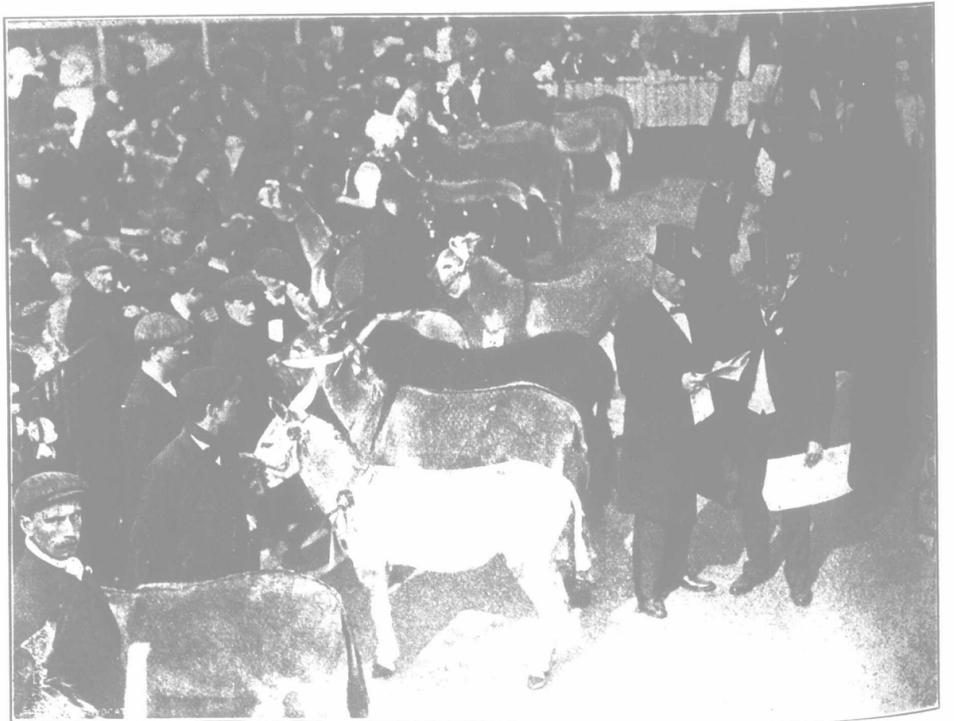
Black, six years old. First prize, Pony Show, London, 1909.

printing Dr. Cottrill's original article, as it could do no harm. He further asserts that it does not cause increased fermentation or formation of gases.

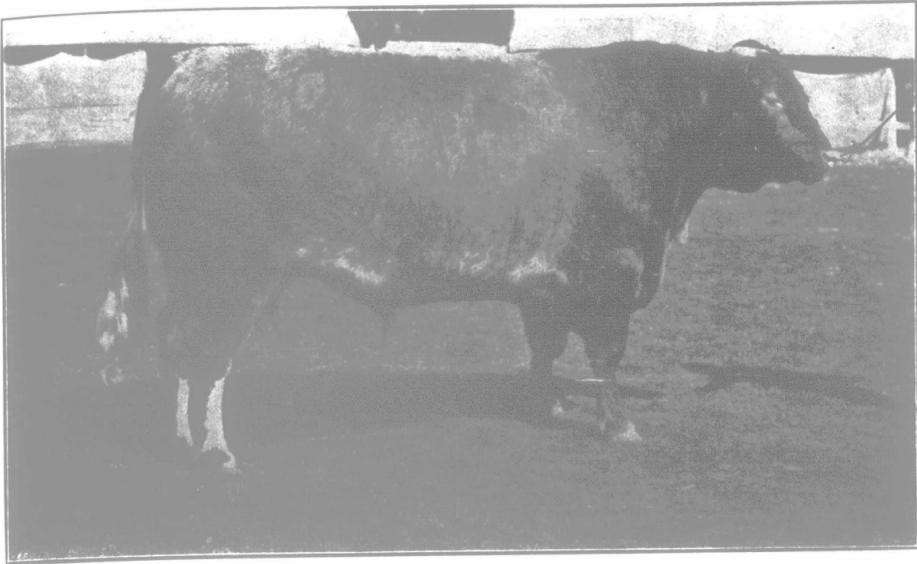
Dr. Cottrill's article was published as being especially applicable to the treatment of colics by farmers or horse-owners not especially versed in veterinary knowledge. An expert practicing veterinarian would usually treat such cases by administering medicines hypodermically.

As for puncturing with a penknife, the most skillful veterinarian would get no results from such an operation. The use of a knife to

demands that it have a place in the driver's outfit. The use of the reins is to guide the direction of the horse's movements, to stop his movements at times, and to be a continual guard against wrong actions of the horse, due to fright, high-spirit, etc. I have never been able to find any sane explanation for the habit of continually jerking the reins, as some drivers do. It may at times serve to stop a bad runaway, as some horses will stop for jerking or "sawing," when they will not stop for the steady pull of two men. But the jerking to start a horse, or to increase his speed, seems to be a



Judging the Donkeys at an English Show.



Duke of Hoole.

Champion Shorthorn bull, Royal Show, 1909.

most absurd action, which can only make the animal bewildered as to whether he is required to stop, or to go forward. Besides this, how unpleasant it must feel. I once heard a doctor say, "He won't start unless I jerk him, he is so lazy." If he is lazy, use a whip. If it is his lack of energy that is the cause, feed more oats, and quit the silly habit. It is more reasonable to carry a sharp stick, and keep poking him behind, instead of jerking his mouth backwards and expecting him to move forward.

No matter how gentle and quiet a horse usually is, something may startle him; so it is wise to keep a fairly close hold on the reins, which lose their usefulness and gracefulness when allowed to hang over the dashboard, or perhaps below the level of the shafts. And in the show-rings, many capable judges give credit to the horsemanship of the driver who changes the position of his hands on the reins each time he turns his horse.

In speaking commands to a horse, for a long time, the recognized words of command have been as follows:

1. Full stop—"Whoa!"
2. To move backwards—"Back!"
3. To move forward—The simple, unspellable "click" of the blackbird; the audible kiss (used also in calling the dog); and the plain English "Go on!"
4. To go slower—"Steady!"
5. To turn to the right—"Gee!"
6. To turn to the left—"Haw!"

Instead of these, what we might almost call "regulation" words, how often we hear a man who pretends to be capable of driving a horse saying words like the following:

1. Full stop—"Whoa-back!" "Back!" "Back up!" "Bike!" and a few others just as meaningless, and as much out of place. Perhaps the word "whoa" in some freak pronunciation, as "hoo-oo!" "how!" "ho!" "huh!"
2. To move backwards—Just the same as No. 1, often said in a louder tone, and repeated.
3. To move forward—"Ged epp!" "Get up!" "Jee up!" "Hi on!" or, perhaps, no word at all, but just a few ugly jerks on the rein. Maybe no more warning than just a cut of the whip.
4. To move slower—Same as No. 1, or perhaps continually repeated "whoa" in one of its varied pronunciations, or continually repeated "back."
5. To turn to the right—"Whoa, Gee!" "Back, Gee!" "Whoa, Back, Gee!" "Gee off!" "Gee over!" etc.
6. To turn to the left—Same as No. 5, only "haw" in place of word "gee."

Now, let us examine one or two of these. What can any man understand by the conflicting order, "Whoa, back!" or how can he both stand still and move backwards at the same time? Then, how is a horse to understand what to do? Try another: What does it mean to "Back up!" if the horse is backing down a steep gangway? Now this one: "Whoa back up here haw!" Where is the juggler who can do all these things at once, much less a horse? And because the animal does not always do what the man wants it to do, it is often cruelly punished by a brutal driver. Why? Because the horse cannot know what one of the three things to do, or because he has been accustomed to such commands, and does not know any meaning for any of them. It is just as easy to say exactly what you mean, and always use the same term. Then your horse knows what is expected of him, and if you insist on commanding just once, instead of saying "whoa," etc., about three or four

times, each time louder than the previous time, you will be surprised to find once is all that is required, and the horse will obey at once. There are very few horses that will not respond at once if driven according to the above plan, if the driver drives like a horseman, instead of like a huckster.

With regard to the terms "Gee!" and "Haw!" they are used generally with work horses, and not with roadsters. Still, it is often very convenient for the driver if his horse knows these terms. On a cold day, when one's driving-mitts are frozen, or if they are wet and slippery, the word "Gee" or "Haw!" is a valuable aid to the reins.

In giving any of these commands, it is well to keep in mind that the horse is not a deaf animal. On the contrary, he hears better than man does. It is, therefore, quite unnecessary to yell our commands. Besides, a quiet tone is easier heard than a harsh, loud one. More than this, many horses, like many people, are nervous, and especially is this the case with light horses. The first result, then, from loud-spoken words is to startle the horse and confuse him. But, in a quiet, gentle and firm tone, the horse hears nothing but the command.

While it is a fact that many horses are near-sighted, and, therefore, often frightened by a piece of moving paper, or something similar, thus making it necessary for the driver to be on the lookout for such things, it is also a fact that most horses can see better at night than we can. No doubt, their hearing, which is so acute, aids them in knowing what is in front of them or around them after dark. Owing to this fact, it is generally quite safe, on a dark night, to let down the horse's check and let the reins hang a little more loosely than usual (unless the horse is vicious or treacherous), and leave the task of finding the road to him. Give him a chance to see and hear what is ahead, and give you warn-

ing of the other rig which you are going to meet, or the water which is running over the road, or the gully where the bridge is washed away in flood-time, or the many other things which he may encounter. Do not ask for great speed on such occasions. Give the useful, intelligent, faithful, but dumb, horse fair play.

Perth Co., Ont. A. DOUGLAS CAMERON.

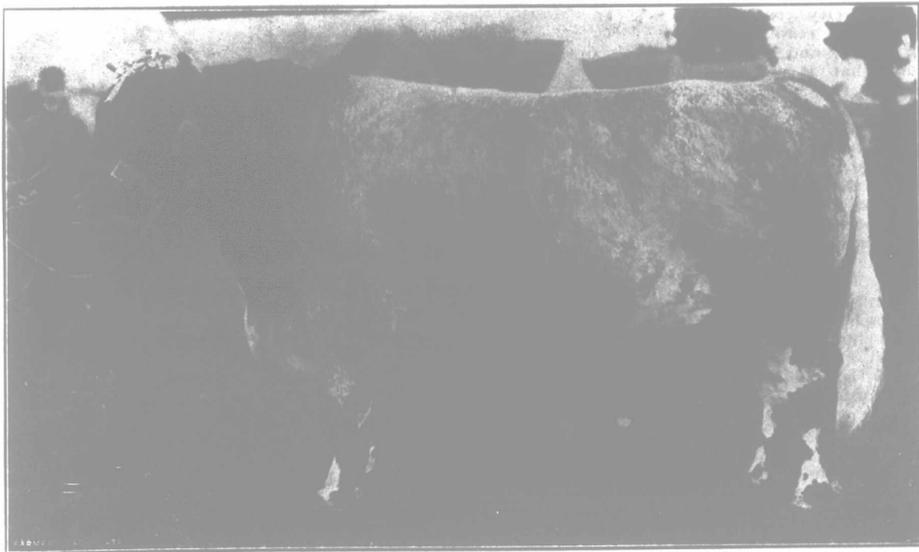
Cost of Raising Colts.

AN AMERICAN HORSEMAN'S ESTIMATE.

Most farmers have abundance of roughage, and if they can only get it turned into manure are satisfied; some, also, raise large crops of roots, or have a silo, and, consequently, can feed young stock for comparatively little. The grain fed to a colt is practically the only item of real expense to them; but, even so, when a man begins to dot down the cost of keeping a colt each season, figures up the total, and has it staring him in the face, he will likely experience a sort of "jolt" that he was not prepared for.

To get an approximate idea of the cost of a colt up to weaning time, it will be necessary to take some cognizance of the risks attending the dam during the period of parturition. Still, good care and common sense will go far to reduce these risks to a minimum, and should a man feel he has not had enough experience, he has right at hand the means to supply this deficiency, in the shape of live-stock insurance companies, which, for a small premium, say of \$5 to \$7, for a short-time policy, to cover the period above referred to, will take the risk off his hands and eliminate the loss of sleep and worry, which he might experience if he carried the risk himself. Next, we would have to consider what the average service fee would be. That would naturally vary with locality and quality of sire used, but the services of a fairly good horse should not exceed \$12.50, or at the most \$15.00. Some horses, of course, stand for more and some for less, but that would seem to me to be a reasonable fee.

The difference in work done by a foaling in comparison to a barren mare, would certainly be in favor of the latter, and this would naturally increase the cost of the colt; a little rest right before and right after parturition being almost a necessity, though it need not be of very long duration, and, in fact, need not interfere with the mare doing odd jobs that do not call for long and continued exertion. Some people are not so fortunately situated as to be able to give their mares much rest, and in that case the old adage of "necessity knowing no law" has to be applied; but we will suppose the case to be one where better conditions exist. A couple of weeks before and the same length of time after parturition should suffice to give the youngster a good start in life. If you put down about \$30 to \$35 for this period of enforced rest and consequent loss of use of the mare with cost of keep; and supposing no accidents occur from then on until weaning time, and the colt is later taught to eat a little bran and crushed oats, obtaining the bulk of his sustenance from his mother, you should have a colt costing you at weaning time not more than \$50 to \$55. But from this time on up to two years old is the crucial period of a young horse's life, and it is then he should have the best feed and attention, for much depends on this whether you have at maturity a good or an indifferent specimen of the equine family, and as the difference in cost is not very material, we would like to impress this point upon everyone who



Alnwick Favorite.

Reserve champion Shorthorn bull, Royal Show, 1909.



Cotswold Shearling Ram.

First at Bath and West of England Show, 1909.



Lincoln Shearling Ram.

Champion, Royal Show, 1909.

undertakes to raise a colt; a man naturally has a pardonable pride in raising something better than the general run, and he cannot do better than keep it in mind, never to allow a colt to lose its colt's flesh, and to keep it going after weaning time right along, and especially up to the time when it becomes two years old, and as long after as he possibly can, for there is no denying the fact that condition is more than half of the horse at any and all times. In winter he should be well protected from the cold, and in summer from the flies. Taken by seasons, the first winter's keep should not cost over \$20; the second summer not more than \$17.50; the second winter, \$25; the third summer, \$17.50; and the third winter, say, \$30. Stabling, breaking and attention should be offset by work done by the colt from two years old up, especially if the colt under consideration (as I assume) be of one of the draft breeds. According to my figures the cost of raising a colt of the heavy breeds would figure out around \$150, or a trifle over; a light-legged one would cost fully as much, or possibly a little more, on account of not being available for much service up to three years old. We should say that if a colt of draft breeding is well grown and gets large and weighty enough, he should sell at an average of \$250 to \$275, leaving the raiser nearly 50 per cent. profit.

Draft-horse breeding is quite profitable at present, in fact, there has scarcely ever been a time when good ones were so high as they are at present. If they are only grown large enough for city trucking, they will sell readily for good money, and I want to say that it pays to raise only the big, good ones, and a man has to have that object in view when he starts in. Nondescripts pay no one. To consider the light-legged proposition, I will leave out the speed horse entirely, as being too much of a lottery to be considered.

A good-sized, well-finished coaching colt, with action, should, of course, command a higher price, but how many raisers obtain such? It is generally the middleman who gets the lion's share of the profits in this class, owing to lack of time, knowledge or ability on the raiser's part to break and fit properly.

In conclusion, would say that a good, sound, stylish Coach horse, well broken and fitted, should bring at least an average of \$275 to \$300, and even at this enhanced price the raiser would not net more than the raiser of the draft colt, the difference coming in through many little expenses, especially of breaking and keeping, which never enter into the cost of a draft colt.

New Jersey, U.S.A. R. P. STERICKER.

LIVE STOCK.

Selection of Breeding Sheep.

Having decided which breed he will take up, the beginner will do well to study the characteristics of that breed, not only by reading and inquiry, but by inspection and handling of first-class individuals of the breed, and thus seek to become a judge of that class. Type and character are among the first points to be given consideration. Sufficient size is important, when accompanied by quality. But an overgrown or abnormal-sized animal is not, as a rule, so satisfactory as a feeder or a breeder as one of medium size, well built, and showing the indications of a strong constitution. The highest average of quality is found in medium-sized animals, and the compact, muscular ram, standing on short, strong legs, and with a broad forehead, wide, open nostrils, a short, thick neck and back,

more or better food. When the sheep is in good health, and thriving, the skin, at least in the case of pure-bred animals, is usually of a rich pink color. And strands of black wool are a disqualification in the eyes of the expert judge.

In selecting ewes for foundation stock or for increasing the size of the flock, it is advisable to deal with breeders of good repute, those whose flocks are of a good and uniform type. Yearling ewes or two-year-olds are the most desirable, if they can be bought at fair prices, but older ewes if they have sound teeth and udders, and are evidently healthy, may be a good bargain at a price corresponding with their age. The autumn months, after the lambs have been weaned, and the ewes have gained flesh, are, as a rule, the best season for making selections. And if they are given good fresh pasture before and during the breeding season, they will take the ram more nearly at the same time, thus insuring a more uniform crop of lambs, as to age. It is also believed that ewes flushed in condition at this

season produce a larger proportion of twin lambs. For the service of a flock of fifteen to twenty ewes, a strong ram lamb may very safely be depended upon, if he be kept in good condition by feeding him a pint of oats and a little bran twice a day, letting him run with the flock. If the pasture is very fresh, the extra feeding may not be necessary, but he should not be allowed to lose flesh to any considerable extent during the breeding season. An older ram, one that has been tried and has proved a good sire, may be safer; and if he can be bought at a moderate price, as is often the case, it is good management to secure such, for the reason that an untried sire is always, to a considerable extent, uncertain both as to virility and to prepotency. It is a grave mistake, however, to allow a few dollars to stand between the buyer and a good ram, as it is through the medium



Shropshire Shearling Ewes.

First prize, Royal Show, 1909. Exhibited by Sir Richard Cooper.

well-sprung ribs and full, firm twist, or buttocks, is the most likely to prove a satisfactory sire and an improver of the flock.

Particular attention should also be given to the quality of the fleece, which should be fairly dense, the staple of good length, the fibre fine, and uniform quality, avoiding coarseness or hairiness on the thighs, which is very objectionable in the estimation of a judge in the show-ring, and also of a discriminating wool-buyer. The condition of the fleece is an indication of the health of the sheep. If it is dry and lifeless, or lacking oiliness and lustre, it is a pretty sure sign that the bearer is not in a vigorous condition, or is being insufficiently nourished, and should be given

of the sire that the quality of the flock is maintained or improved, and in this, as in many other transactions, the best is generally the cheapest in the long run.

It is practically certain that the farmer who starts a flock of sheep on a good foundation now, will find it a profitable investment, as the price of wool, mutton and breeding stock in the United States, which is our best market for sheep, has been higher this year than for many years past, and the prospect is that the demand will continue

Look at the date on the label of your Farmer's Advocate once in a while. Then you will know when it is time to renew your subscription.

Ireland's Pig-breeding Industry.

Of all farm animals, the pig is undoubtedly the one most commonly associated with Ireland, and its familiar and dignifying title, "the gentleman that pays the rint," embodies a good deal of suggestiveness as to its importance to the humbler classes throughout the country in helping materially to keep many a small homestead together. Food refuse and damaged farm produce, which could scarcely be converted into salable commodities otherwise, are admirably suited for economical use in the feeding of pigs; and the disposal of the animals—farm scavengers though they may be regarded—brings in money at critical periods of the year. There are between 1,200,000 and 1,300,000 pigs in Ireland, and this works out at about 300 per thousand of human population, a proportion far in excess of England and Scotland. Looked at from another point of view, in comparison with Denmark, England and Scotland, the number of pigs and people in Ireland per 1,000 acres may be seen at a glance at the following figures:

	Per Thousand Acres.	
	Persons.	Pigs.
Ireland	215	65
Denmark	266	153
England	1,017	69
Scotland	245	8

WHITE HOGS IN FAVOR.

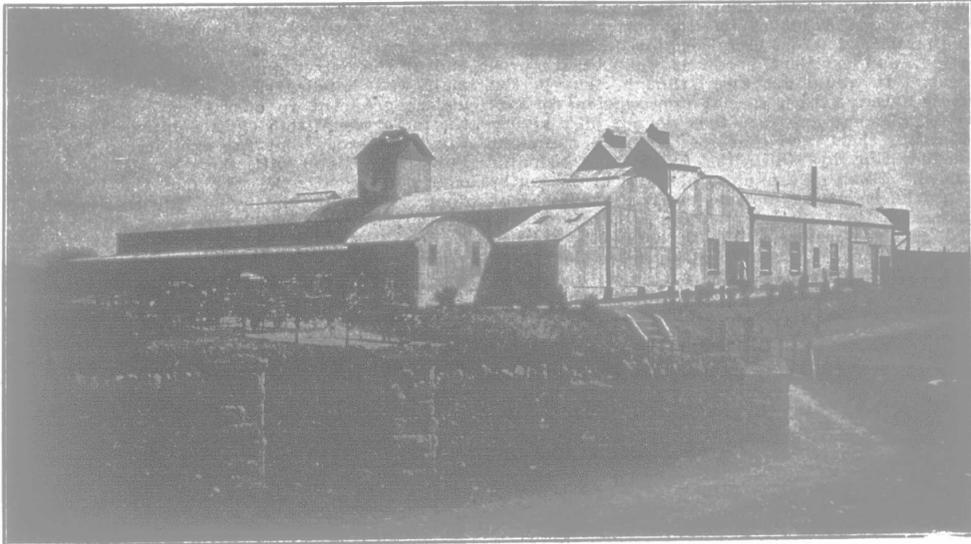
Fifty years ago or so the black Berkshires were an extremely popular breed throughout Ireland, but they have been now almost completely ousted by the advance of the Large White York, which, both in color and shape, is generally—though not unanimously—regarded as the class of hog most suited to the bacon-curer. It is, consequently, the most widely distributed, except in the north, where there has long existed a race of white native pigs with characteristics of form very similar to the Large Black breed. Within the past two years, under the auspices of the Royal Ulster Agricultural Society, a herdbook has been established for these native animals, and last spring the inaugural volume of this register appeared, containing the encouraging number of 54 boars and 166 sows, all accepted for entry after a careful inspection as to their trueness to type, as required by the authorized breed standard. These northern pigs, known as the Large White Ulsters, are a most valuable type, and are very rapid fatteners. They are lengthy and deep in the body, plump and well developed in the hams, and one great outstanding characteristic is the absence of hair; another is the peculiar forward drooping ear of big size. The accompanying picture of a typical boar will be of interest, as undoubtedly the breed has a great future before it. The Large York has enjoyed the enterprising patronage of the South of Ireland Bacon-curers' Pig-improvement Association, a body which established three breeding centers, at Cork, Limerick and Waterford, and which, before the Dept. of Agriculture came into being, sent throughout the country, at a cost of some £13,000 or £14,000, upwards of 2,000 boars of the breed mentioned, to cross with the common stock of the land. The Large Black a few years ago came to Irish farmers with a proved reputation as a rapid-growing and easily-kept animal, and made a host of friends, but many of the curers have practically boycotted it on account of its color, and much annoyance and friction has been caused by their action.

Boars of all three breeds are eligible for premiums under the Department's Swine-improvement Scheme, the subsidies being £3 for the Ulsters and £5 for the first year and £3 for the second in the case of the other two. In one year (1908) the available supply of premium boars, as in previous seasons, fell short of the demand. A sum of £1,670 was allocated by the Co. Committees for the scheme, but only about £1,200 was expended. This provided 284 boars, of which 225 were Large Yorks, 42 were Large Blacks, and 17 were Large White Ulsters. Taking the estimates for 1907, the total number of boars at service in Ireland was 2,110; no fewer than 1,339 of these being Yorks, 70 Large Blacks, 53 "other breeds," and 638 cross-breeds.

Before passing on to the question of management, it might not be here out of place to state that there has been a considerable improvement effected in the class of pigs kept during the past quarter of a century, and narrow razor-backed, coarse, heavy shouldered, and weak-hammed animals are gradually giving place to better-substantiated and nicer-shaped stock.

HOUSING AND MANAGEMENT.

The housing of Irish pigs is an aspect of the subject that can be more favorably reported on now than it could have been, say, five or ten years ago. The adoption of useful information on the construction of suitable piggeries has led to much improvement, and many stuffy, ill-ventilated and damp sties have been replaced by up-to-date, well drained, bright, airy and dry buildings of stone, brick or concrete, situated at proper distances from the dwelling house. Of course it must be admitted that on many holdings con-



Roscrea Bacon Factory.

(Established about three years ago.)

This shows the first Farmers' Bacon Factory established in the United Kingdom: Situated at Roscrea, on the borders of King's Co. and Co. Tipperary. Farmers' carts can be seen bringing up the pigs to the receiving office.

siderable room still exists for improving in comfort and cleanliness the pig sties.

The brood sows receive varied treatment, according to the attentiveness of the individual farmer, or, rather, of his wife and daughters, as generally the feeding of the pigs is left to the feminine portion of the family. The majority of the sows are, on the whole, treated wisely, and are liberally fed with skim or butter milk, cooked potatoes, crushed Indian meal or barley meal, and

credited to a matron in the Co. Wexford. She would have to feed them on the instalment plan.

All over the country the farmers who handle pigs may be divided into three classes: First, the man who breeds, feeds and finishes (this group being but a very small proportion); secondly, the man who breeds and sells; and, thirdly, the man who buys and feeds. Of the lot, taking one thing with another, the class first indicated stand to make most of the business, though the second

group also gain considerably when the prices of young pigs rise, but their benefit from such a cause is exactly counterbalanced by the handicap imposed on feeders who have to purchase at such a time.

Reference has already been made to the distinct types or breeds in the north and south. Geographically, there are also marked contrasts in the systems of handling and disposing of the crop of young pigs in Ulster and the other Provinces. In the north the general practice among those who breed and sell is to wean the pigs at the age of six or eight weeks, and a week or so afterwards, to sell them to feeders, who immediately set about fattening them, and strive to finish them at 1½ cwt. or 1¾ cwt., at an age of four or five months, this weight being the most popular. In the south, weaning takes place about the same age, but when the animals have changed hands,



Roscrea Bacon Factory.

View in disbowelling department. The pigs shown have been scraped and washed free from the black deposit acquired in the singer, and are now ready to be dressed.

general remains of food from the house, sharing this otherwise waste material with the poultry, which roam the yards and paddocks. The usual practice is to mate the sows so as to have them farrow twice yearly, viz., about February or March in the spring, and about October in the autumn. A fairly good average litter, with which the sow can do herself justice, is reckoned to range from eight to twelve youngsters, though, of course, bigger numbers are obtained—only a few weeks ago the extraordinary litter of 32 was

as bonhams, about two months old, they are in a great many instances kept as stores, and the fattening process is not really started till they are seven or eight months of age, so that an animal reared under this system may be fully a year old before it is ready for the butcher. Of course, the earlier maturity achieved in the north is the most desirable.

FEEDING AND SELLING.

In the character of the feeding, also, there is a marked difference. In the north potatoes, but-

fermilk and Indian meal form the staple dietary, but in the southern counties, where there is in most seasons a lot of inferior barley available, this material is most useful employed as the grain ration, and excellent bacon it undoubtedly produces. It would not seem, though, that in the north buyers attach special appreciation to barley-fed pigs; at any rate they do not offer higher prices for them, and that, of course, is the main consideration by which the feeder is principally guided. Skim milk is more plentiful in the south, as might be expected from the larger number of creameries there, and interesting experiments carried out last season at the Department's Station at Clonakilty, Co. Cork, went to prove that separated milk fed to pigs along with meal and potatoes gave a return of 2d. per gallon, when pork was sold at 48s. 3d. per cwt., and that each increase of 7s. per cwt. in the price of pork would be equivalent to an additional 1d. per gallon to value of the skim milk for pig-feeding. To return 1d. per gallon, it was found that the produce must not be selling below 40s. 4d. per cwt.

When the animals have been fattened at whatever age the system followed provides for, the methods of selling are quite different north and south. In the former, all fat pigs are brought into the open weekly markets and sold dead, according to weight, and the fixed price of the day. They are either killed by the farmer himself or by an itinerant "sticker," who visits the farm for the purpose as required, and slaughters at 1s. per head, generally the day before the market. The northern system gives great satisfaction to both owners and buyers, as everything is done in a straight and businesslike manner. Of course, it is open to the criticism that when a man has killed he must dispose of the carcass at once, be prices good or bad, but they are shrewd farmers in Ulster, and they keep a good eye on market movements, as a rule, and the majority of them time the ups and downs of the trade pretty carefully. In the south, on the other hand, the pigs are sold alive at fairs' markets, or at factory gates, where there is no recognized register of current prices, and where, too often, the owner is, so to speak, at the mercy of a ring of buyers (for the curers and others are well organized), and rather than cart their pigs back home, perhaps miles, is willing to part with the animals at the buyers' own terms. Open and fair competition is often conspicuous by its paucity at these southern gatherings.

To contrast once more the north and south, it is the opinion of competent observers that the industry enjoys greater stability in the south, in spite of all its disabilities. Certainly the fluctuations from year to year in the number of pigs kept are more violent in the north, but more of this anon. As inferred above, the more highly developed dairying industry and the more numerous creameries in the south help to keep the pig-raising business on a more steady basis, for it is plain to everybody that the spread of dairying demands some such adjunct as pig-feeding to enable the fullest profits to be reaped from its practice. In many districts where pigs are raised extensively the calves are sold when only a few weeks old, in order that the milk may be available for the pigs.

RELATIONS WITH THE CURER.

Having thus briefly disposed of the questions of breeds, feeding, rearing and selling, let us take a brief glance at the further aspect, in which the curer comes on the scene. There are about 40 bacon-curing factories which deal annually, it might be estimated, with 800,000 to 900,000 pigs, and employ anything between 1,500 and 2,000 workers. Irish-cured bacon and hams, it is hardly necessary to say, enjoy a very high reputation in the best British consuming centers, and their superior fame has been unfairly imposed on by unscrupulous traders in Great Britain, many of whom during the past few years have been smartly brought to book by the Department of Agriculture for palming off as "Irish" inferior American and other foreign imported stuff. A new departure which received a great stimulus when the outcry arose against the notorious tinned meats from Chicago not so long ago, has been the making up of cooked ham, tongues, etc., in glass and other receptacles. Put on the market in this form, such outputs from curing establishments have become very popular.

At this point let me say that it is questionable if the Irish farmer gets fair play from the proprietary curing firms. Friction often arises over the matter of price, etc., and relationships are sometimes strained. This leads up to a most significant sign of the times, and one which the Canadian commissioners will be bound to take cognizance of, viz.,

THE SPREAD OF CO-OPERATION

to the bacon-curing industry in Ireland. The first farmers' curing factory to be established in the United Kingdom is located at Roscrea, in County Tipperary, and started work on the 2nd of January, 1908. It was enthusiastically pioneered, and a canvass of 26 parishes brought into the organization 2,800 shareholders, the capital aimed at being £15,000. The cost of the land and the

construction and equipment of the buildings worked out at £7,500, and during the first year the workers engaged ranged between 30 and 40. The capacity of the factory is 750 pigs per week, and at the outset an average number of 200 animals were handled each week. Each member is under agreement to offer every pig he fattens to the factory. Within eight months of its opening, Roscrea factory sent five exhibits to the London Dairy Show, and with these won three prizes, in competition with the whole of the United Kingdom. The accompanying illustrations of this enterprise will doubtless possess considerable in-

total falling off. Within the past quarter of a century or so, the highest number of pigs in Ireland in any one year was in 1890, when we had 1,570,279, and the lowest was in the year 1880, when the total was only 849,046. A closer examination of the figures for the most recent years discloses a weighty fact, which has a very direct bearing on the present restrictions in the supplies. It is that the number of breeding sows has declined out of all proportion to the total decrease. Thus of the 99,000-odd, no fewer than 18,744 were brood sows, and of these, again, no less than 9,504 were lost to Ulster. Why should farmers

kill off their sows? Well, apparently, in the period under review an explanation can be found. Potatoes were very scarce and dear in 1907, and it was found more profitable to market the entire crop direct than to feed it to pigs; and so many sties were depleted. Of course, as the autumn wore on bacon markets showed evidence of poor supplies, and prices immediately began to rise, with the result that many farmers yielded to the temptation to kill off even their sows. Matters were made worse when the spring of the following year brought with it higher prices for maize and other purchased feedingstuffs, and on many farms breeders were so much discour-

aged that they temporarily abandoned any attempt to raise pigs to the usual extent till prospects improved.

Now a word and a few figures in conclusion, to show the extent of the exports of Irish pigs and their products. The figures for the year 1907 are the latest available, and they show the following exports:

	Quantity. Cwts.	Value. £.
Pork	45,846	107,738
Bacon	859,608	2,492,863
Hams	120,021	504,088
Total	1,025,475	£3,104,689

Considerable quantities of bacon and hams are

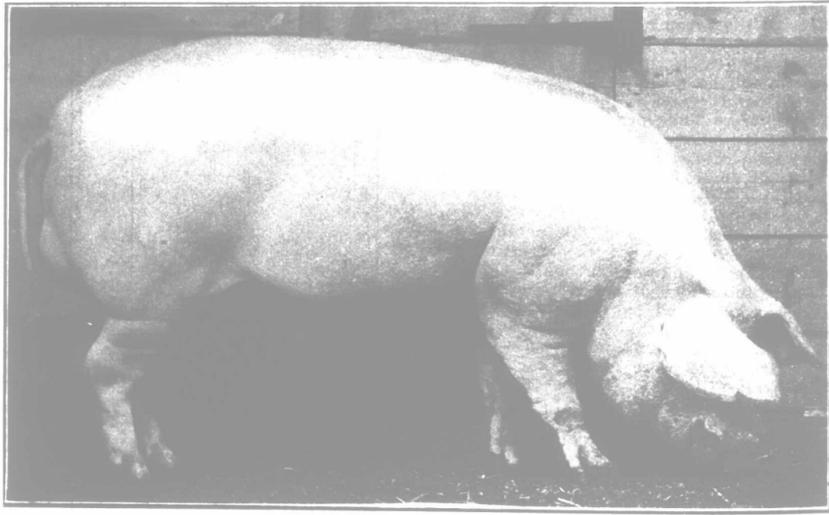


Astley Abbott.

Tamworth boar. First and reserve champion, Royal Show, 1909.

terest. I give it special prominence, as it is hoped that it will prove to be but the forerunner of many similar undertakings. Already, at Enniscorthy, in the Co. Wexford, arrangements for a co-operative factory, which will deal not only with pigs, but also foster a dead-meat trade in beef and mutton, are in an advanced state. Denmark has over 30 such organizations, and their spread in Ireland will mark the dawn of a new era for our hog industry.

The Canadian commissioners come to Ireland at a time when high prices, consequent on alleged scarcity, are ruling, much to the dissatisfaction of consumers of bacon and pork. In this connection, however, unless Government estimates of the pig populations in Denmark, Canada and the United States are all astray, it would not seem that any



Large White Ulster Boar.

of these three countries—the leaders among the United Kingdom suppliers from abroad—are decreasing their numbers of hogs. In Ireland, the total fluctuates from year to year, according to the supply and price of feedingstuffs and the trend of values for the finished article, but the difference between the 1907 and 1908 aggregates, though amounting to the substantial decline of 99,300 (from 1,317,068 to 1,217,768), only indicates about the usual variation.

In light of what has been said in regard to the peculiarities of pig industry in Ulster, it is worthy of special note to remark that this Province was responsible for no less than 80,945 head of pigs

also exported under the heading of "Provisions and Groceries," which amounted in the year named to a value of £243,290. As against the above figures, we had imports of 14,150 cwt. pork, value £7,930; 773,547 cwt. bacon, value £2,146,593; and 27,514 cwt. hams, value £78,759. The exports of live pigs during 1907 are clearly set out in the following figures:

	Number.	Value.
Fat swine	448,578	£1,570,023
Stags	33,329	66,658
Total	481,907	£1,636,681

Including coarse meats, it might safely be computed that the exports of live and dead pigs are equivalent to a value of £5,000,000 per annum, according to the latest returns. The quantities exported have increased of late years.

"EMERALD ISLE."

Constitution in Sheep.

Why is it that there is such a difference in the condition of individuals in a flock of sheep? When food has been rough and somewhat scarce, some sheep will be in fair condition while the others show hungry-looking and thin. When the animals have been receiving plenty of nourishment, still the difference will appear. The specimens that got along the best on poor fare will be the ones that will show up lusty and fat and vigorous under better treatment, while those that could scarcely live when poorly fed will still be much behind the others, though receiving all the food they care for. There can be observed individual sheep which will not thrive, no matter what the surrounding conditions may be; they starve on low diet, and if fed abundantly their digestive organs fail and they get sick. On the other hand, some animals are of distinctive merit. We well remember a farmer who made no pretensions of keeping high-class show sheep, but yet whose flock was fairly well bred and well fed, buying a ram for stock purposes from a neighbor who made something of a specialty of show sheep. This animal was somewhat aged, but was of a good type, and at the time of purchase in high condition. It was, of course, expected that he had been pampered, and that he would fall away rapidly under ordinary care; that his fat having been developed for show purposes, would waste quickly when extra feed was withheld, but not so. That ram never lost his flesh. He had a good appetite for all kinds of food, and stayed fat.

Now, why this difference in sheep, and, indeed, in all classes of farm animals? One word answers it—constitution, the ability to make good use of the food they receive, and to turn it into wool and mutton. There seems to be something more than mere shape and type to account for the difference in the constitution of animals—perhaps temperament counts—but there are certain types that can be wisely avoided, and others that can as safely be depended on. A flat-sided, thin-shouldered animal, with front feet close together, is nearly always a hard doer and unprofitable; but well-sprung ribs, flat back, shoulders thick through and not sharp on top, legs straight and set well apart, and wide chest, betoken an ability to make the best of whatever comes, and to be happy, and, consequently, profitable.

Minimum Rate at Which Silage Should Be Lowered.

Observations indicate that if silage is fed down at a rate slower than 1.2 inches daily, moulding is liable to set in. This is more likely to be true in the upper half of the silo than in the lower half, but it will be prudent to have the silo of such a diameter as to lower the surface more rapidly in feeding than is necessary, rather than less rapidly.—Prof. F. H. King, in *Physics of Agriculture*.

THE FARM.

Selecting Corn for Show.

By Prof. M. L. Bowman, Iowa Agricultural College, before Kansas State Board of Agriculture:

There are a great many different points to be taken into consideration in selecting a sample of corn for show purposes. An ear of general utility should always be uppermost in mind. We often find at corn-judging contests a ten-ear sample of corn in which each ear, while it may be very serviceable, differs so much from the other ears in the sample that it is impossible for the sample to rank high in the competition. When choosing a sample of corn, like the choosing of animals for breeding purposes, it is necessary that there be a definite type in mind, and that each ear of the sample conform as near as possible to that type. The type will vary according to the variety of corn which is being grown, and this type should be firmly fixed in the mind of the one who intends to show.

The ears should be, as far as possible, of the same shape, of uniform length and circumference. The kernels of each ear should conform to each other throughout, being of uniform size and color. Too often the regularity of the kernel is lost sight of, and an ear will be displayed in which the kernels have a tendency to run in various directions, as well as being of numerous sizes. No matter how well matured an ear may be, having a very desirable shape, of good size, and shelling a high percentage of corn to cob, if the kernels are very irregular and of different sizes it is impossible for that ear to rank high as a seed-ear. This applies to our dent varieties, all of which we expect to be regular and uniform in kernel.

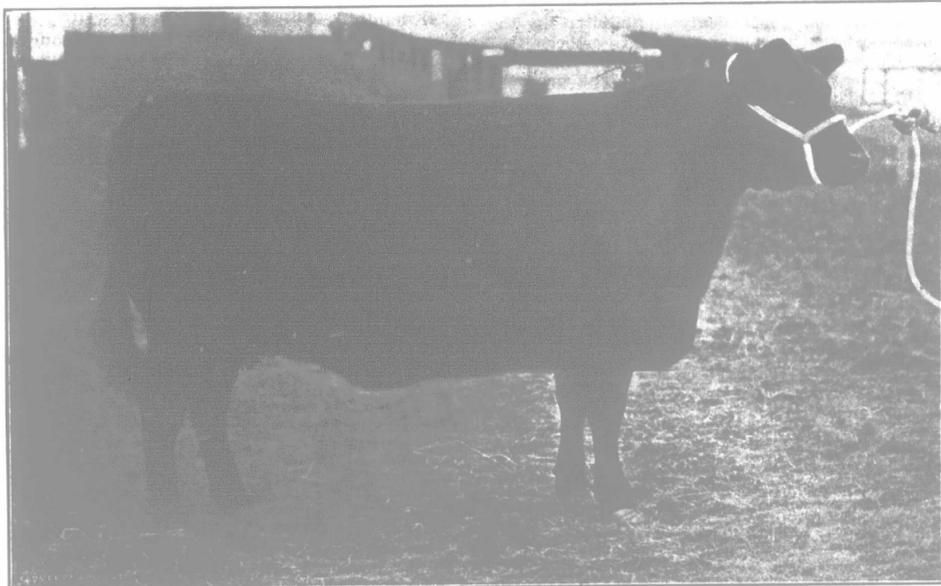
The butt and tips should be well filled with

kernels of a regular, uniform size. The tendency is for the kernels to be large and of irregular size at the butt, while often small and shallow at the tip. An ear should not be thrown out because the tip is not completely covered. A good butt is more essential than a good tip; it is, however, very essential that there be a large amount of good corn between the butt and the tip.

There is another class of samples that is very frequently found at corn-judging contests, in which the ears are of quite uniform size and shape, yet the kernels are greatly different. The width and thickness of the kernels in each respective ear,

to examine them to see that the sample conforms in uniformity of kernels, as well as uniformity of ear, than the judge can properly judge a sample of corn without also examining the kernels in each ear exhibited. The depth of kernel, plumpness of tip and size of germ are important factors.

An immature ear is not entitled to a place. Maturity cannot be profitably sacrificed to size of ear, while a nubbin is never desirable from the show standpoint. The practical ear, and that is the ear for which we should strive, is the largest possible ear that will mature in each respective locality, being of the desired type and shelling a



Violet 3rd of Congash.

Champion Aberdeen-Angus female, Highland Society's Show, 1909.

together with the smooth surface, can easily be told by merely looking at the ear, and too frequently right here is where the examination stops. The length of kernel should be examined as well.

Very frequently at corn-judging contests I am asked the following questions by exhibitors: "Has a person a right to take kernels out of an ear to examine them before showing?" He most certainly has. It is impossible for him to be sure regarding the depth of the kernel without making an examination. The best way is to take a couple of kernels out, examine them for shape and

high percentage of corn to cob. A smaller matured ear is much more desirable than a larger immature one.

Examine each ear thoroughly. Samples of corn with germs showing evidence of freezing are found very frequently at corn shows. Such samples are unfit for show, and should receive no place in competition with corn for seed.

Silo Filling in Nova Scotia.

Editor "The Farmer's Advocate":

The desired stage of maturity in corn for silage

is closely approaching the glazed state. This, however, is seldom reached in this Province. During our first few years' experience we were so afraid of frosts that we took no risks, and often cut the corn earlier than necessary. After having got caught once, however, and failing to notice any depreciation of the quality of the silage, we now take chances, and usually have slightly-frozen corn to handle. As our first frosts are usually light, we have never had corn sufficiently frozen to become dry enough to need added water when putting in the silo.

We usually plan to have teams follow the cutter pretty closely. If cut ahead for several days, a rainstorm often occurs which



Merriment.

Hereford cow. First at Royal Show, 1909.

depth, and place them back in the ear, turning one of them about; in this way they will very generally retain their place. There is a very common opinion prevalent that if a couple of kernels are taken out of the ears that the judge is very liable to consider that these kernels were "white caps," and, therefore, the ear will be discriminated against. An exhibitor can no more exhibit a ten-ear sample of corn intelligently without taking a couple of kernels out of each ear

washes earth on it and makes it very bad to handle.

We have never tried a binder, and use a short-handled hoe in preference to a sickle. A good man can cut one acre per day with a hoe.

We use three wagons and two teams, and keep an extra man to assist loading in the field. Ordinary farm wagons are used by lengthening out the gear pole and using two heavy poles, 20 feet long. One end of the pole is laid on top of the fore

axle and the other end chained underneath the rear axle. This makes a very low wagon, on which the corn is laid crosswise, with the butts all one way. The load is drawn alongside the cutting-box, with the butts next to the feed table. This wagon load is left there, and the team changed to the wagon which has just been unloaded.

For cutting-box, we use a No. 16 B Thom blower, and will now use a 12 h-p. gasoline engine. Have previously used all kinds of power, all of which was satisfactory when, we had enough of it. We found that a two-horse tread power was not sufficient for a blower.

We have our own outfit, and handle about 25 tons of silage daily. We consider it important to have ensilage material evenly distributed in the silo, and to have it well tramped around the outside. We keep a man in the silo for that purpose. Under ordinary conditions eight men are sufficient. Their work would be as follows: two cutting in the field, two teamsters, one extra man to assist the teamsters loading, two at the cutting-box and one in the silo. We have no trouble to get any extra help we require.

It costs about \$16 per day for labor and teams to put in 25 tons of corn. We have had no experience in cutting and husking. In fact, corn seldom matures sufficiently in this Province to admit of husking.

F. L. FULLER,
Truro, N.S. Supt. Agricultural Societies.

Homemade Lightning Rods for \$11.00.

Editor "The Farmer's Advocate":

Some years ago we made and put on our buildings lightning rods of our own, and on inspection a few days ago found the rods, standards, fastenings, etc., in as good condition as when first erected. We put one complete rod on the main barn, grounding both ends, and a separate one on the straw shed, grounding only one end. "The Farmer's Advocate" has so often published detailed directions for this work, which we followed. That I shall only emphasize a few of the most important points to be observed in putting up the rods. In making the rod, eight strands of No. 9 soft galvanized wire were used, a wagon wheel being used to do the twisting. In grounding the ends of the rod, care should be taken to have the end reach very moist earth—standing water is better—and the strands spread in all directions. Avoid sharp turns, either in turning the rod over the end of the building or in joining the uprights to the main rod. In attaching to the roof, keep the rod tightly drawn and stapled every two feet; ordinary fence staples serving this purpose. The standards to hold the uprights should be placed not more than twenty feet apart, and can be made by any blacksmith at a cost not exceeding fifty cents each. Although I used a copper point on each upright rod, I do not recommend others to do this, as they are expensive, and serve the purpose no better than the end of the rod, having strands unraveled about four inches, and spread in all directions. The whole job of making and putting up the rod took two men one day, and the entire cost might be summed up as follows:

Wire for rods	\$ 3.50
Two men's work one day	3.00
Eight standards	4.00
Eight copper points	4.00
Staples and sundries50
Total cost	\$15.00

From this might be deducted the \$4.00 for copper points, leaving a total cost of \$11.00 for a good, substantial, attractive-looking lightning protector.

J. M. McCALLUM,
Perth Co., Ont.

Plowing Matches.

Editor "The Farmer's Advocate":

I see they are taking great interest in plowing matches in the West. Well, we have had the same thing here, but have no use for them now. The 5 x 8-inch furrow has had its day. When we had to rely on the old spike-tooth harrow, then the sod had to be "set up" to enable us to scratch off a little earth to cover the seed, but now, with modern tools, such as the disk and spring-tooth harrow, we want our sod laid flatter, and thus laid, the sod will rot very much better and better crops will be obtained. Then these matches encourage the use of the single plow, which would be a fatal mistake when help is so scarce, and when a boy and three horses can do the work of two men and four horses. But if people will have single-plow contests, let them cut a sensible furrow, of say 4 or 5 x 10 inches. Why not have matches arranged for the two-furrow plow? Have the principal makes represented, and by actual and impartial test, decide which plow would be the better for farmers to buy, and thus encourage the use of this most valuable implement.

Queen's Co., P.E.I. A. A. MOORE.

Prefers Silo to Husking.

Editor "The Farmer's Advocate":

We want the corn for silo well matured, and take chances of frost rather than put it in green, and do not usually cut before the last week of September. Last year it was the last day of September, and in 1907 it was the first day of October, and it was not injured by frost. We refilled the silo the 10th of October, but the corn was overripe then, so that the grain was knocked off the cobs and the cattle would not eat them.

We use a corn harvester, and cut one or two days before filling silo. If frost threatens, would cut four or five days earlier, as it requires very hard frost to injure corn in the sheaf.

In hauling, we use three teams if near the silo, if sixty or seventy rods from it, we use four, and keep three men in the field to help load. Flat



Bottesford Marchington Queen.

Yorkshire sow. First in class and reserve champion, Royal Show, 1909.

racks, 14 or 15 feet long, on low-wheeled wagons, are convenient for loading. We set the cutting-box so that we can drive close up behind and throw the corn on the box and on the table beside it, keeping one man to help unload.

Hire a 14-inch cutting-box and a twelve-horsepower steam threshing engine to drive it, the charge being \$10.00 to fill a silo twelve feet in diameter and thirty feet high. We filled ours of that size last year from 10 a.m. to 5.30 p.m.

We turn the elbow on the pipe so as to deliver the corn in the center of the silo, and keep two men there to level and tramp. Altogether, we have ten or twelve men, and can usually get them by changing with neighbors.

If one had all the help to hire it would cost about fifty dollars to fill a silo. We have never cut more than four or five loads for husking—just what would not go in silo. Have cut and stooked in the field before we built a silo, but would quit growing corn rather than go back to that.

Peel Co., Ont. H. C. CLARRIDGE.

Bridges.

A new situation has grown up within the past few years in regard to bridge building. Timber has advanced in price until almost prohibitive, while the use of steel and concrete has developed. Wooden bridges have been so long in use, the material is so generally understood, that for short spans little skill was needed in their design, beyond that of a good carpenter or practical workman. It is not surprising, therefore, that much uncertainty has arisen in the use of concrete and steel for highway bridge purposes.

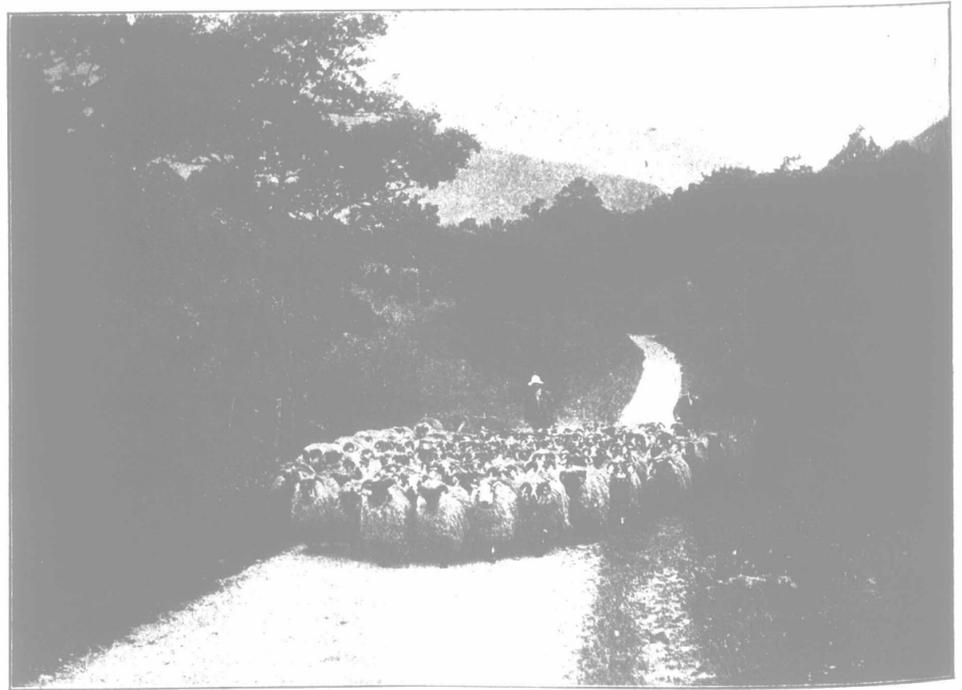
There is frequent request for standard plans for bridge construction, in the belief that bridges are merely a matter of span. This is true to a limited extent only. So long as timber was being used and temporary construction was being followed, present requirements only had to be considered; but concrete and steel are permanent types of construction. Concrete, in particular, is a material that will last for centuries. When materials of this class are being used, it is highly important that they be used with skill, in order that future generations will not regard them as an eyesore or a joke. Every bridge possesses more or less individuality, according to the site and location. The placing of wing walls, the amount of water-way to be provided, the fixing of the height of the bridge, the type of superstructure, the requirements of the foundation, and many other details, should be considered, in order that our works

represent to future generations, as well as our own, the skill and knowledge we have actually attained.

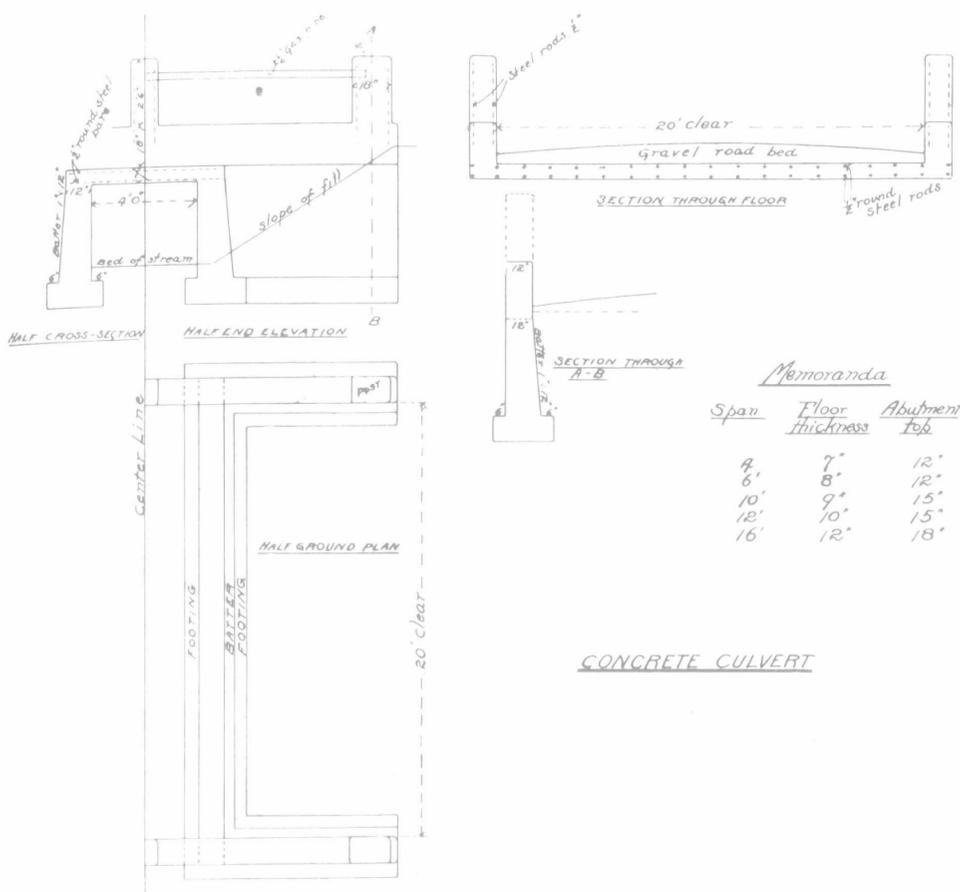
The line between a culvert and a bridge is not definitely drawn. By some the difference is considered a matter of size; by others, bridges are regarded as pertaining to flowing streams, culverts to drains.

Small waterways and culverts are vastly more numerous than are long bridges. For one bridge of 100-foot span there are in Ontario a score fifty feet long; while nearly every mile of road has half a dozen culverts for drainage. While the cost of one culvert is trifling in comparison with one large bridge, yet the greater number of small culverts renders them, in the aggregate, an important detail of highway building, and good design, good workmanship and economy are as necessary in the one as in the other.

Short-span waterways, while capable of rough-and-ready methods, are also capable of treatment that will make them an ornament rather than a



Blackfaces at Rowardennan, Scotland.



disfigurement to the King's highway. A good appearance is not a matter of expense, but of good workmanship in design and construction. Neat culverts are merely a matter of good taste and good judgment, such as every progressive farmer tries to show on his own property.

The smallest waterways may be made of concrete tile, and when well laid are durable and serviceable. Tile culverts should have end walls of concrete extending below the frost line. These walls serve several purposes. They retain the earth at the end of the culvert, prevent water flowing outside of the tile, keep the ends from being washed out and undermined.

There is a tendency to use tile where culverts of larger size should be used. The area of waterway should provide, not for the ordinary flow, not for the average spring freshet, but for the maximum rush that may occur in a term of years. Unless this is done, washouts are certain to occur.

For waterways of larger size than tile culverts, the accompanying sketch will indicate a plan suitable in many cases. Simply described, it is made up of two side walls, with a slab of concrete over them. End walls are also provided to retain the earth, supporting the hand-rail and acting as wing walls. In numerous cases, to provide for the rush of water, it may be necessary to place the wing walls at an angle with the barrel of the culvert; but walls parallel with the roadway are much more desirable where the situation will admit of them.

In all concrete work there is a tendency to failure because of carelessness on the part of workmen. Every precaution should be taken to use clean sand and clean gravel; to use good Portland cement, and to see that all materials are thoroughly mixed. Use clean water. The strength of concrete is as much dependent on the other materials employed as it is upon the Portland cement. Thorough mixing cannot be too strongly insisted upon. The sand and cement are first to be mixed dry. The mixture of sand and cement should then be mixed with the gravel or broken stone, and water afterwards added to make a moist mixture. Wet concrete is preferable to concrete that is too dry, but a happy medium should be aimed at. Concrete should be just so wet that when placing it in the moulds a smooth surface can be secured. This smooth surface should be obtained by forcing a spade between the concrete and the form-work, permitting the wet mortar to flow behind the spade, and thereby obtaining a smooth face of fine material.

In getting a good surface finish on concrete, the process just described should be followed. No dependence can be placed on a coat of plaster over a rough mass of concrete. The plaster is certain to discolor, and will sooner or later scale off. To remove the marks of the timber form-work, it is well to take down the form-work from the exposed faces as soon as the concrete is hard enough, and rub the face over with a flat brick or stone.

It has been stated that concrete should be made

of Portland cement, sand and gravel; or in the place of gravel, broken stone may be used. For concrete floors, such as are required for the culvert shown in the accompanying sketch, the proportions should ordinarily be one part of cement, two of sand, and four of gravel; and for the abutments and wing walls, one part of cement, two and a half of sand, and five of gravel. Frequently, concrete is made by mixing cement and gravel only, but in this process there is great danger of having concrete that is very porous. The theory of concrete is that there should be enough Portland cement to fill the voids in the sand; and enough of the resulting mortar to fill the voids in the gravel or broken stone. For this reason, the entire mixture should grade from stuff that is very fine to material that is coarse. The real strength of concrete is in the strength of the mortar which unites the stones together. Very fine gravel is objectionable, as the resulting concrete has not the strength obtained by larger stones held together with a strong mortar. Where gravel contains a large percentage of fine stuff, it is usually desirable to screen it. If the fine material removed is clean and equal to a good building sand, it may be used to form the mortar, and can then be uniformly intermixed with the coarser material. A further objection to the use of gravel without this precaution, is that the finer sand is seldom uniformly mixed, but lies in pockets, and the resulting concrete is of very uncertain composition.

Timber forms supporting the concrete should be strongly bound together, with plenty of wire. A great deal of inferior work results from neglect to use properly braced and tiled form work. This applies especially to the floor supports. In bracing

the form work, which is to support the slab covering, it should be an inch or so higher in the center than at the sides, to allow for settlement.

When work has been interrupted, and is again commenced, see that the old surface is thoroughly flushed with water before new concrete is deposited. The joint should be commenced with a cement grout of one-to-one mortar over the old work; or it is a successful practice when the old surface is wet, to sift over it a light coating of Portland cement. All concrete should be deposited in the forms and worked to place as quickly as possible after being mixed. As a rule, thirty minutes is the greatest period that should elapse. Any setting that has taken place and is broken in the further manipulation of the concrete, is destroyed and is finally lost to the work. For this reason, good concrete that has been put in place should not be disturbed until it has thoroughly hardened and set. All concrete, when it has been put in place, should be quickly rammed and worked in layers, so as to make the concrete perfectly compact and free from spaces and air bubbles.

As soon as the concrete slab of coarse stuff has been put in place, it should be coated over with a one-half inch covering of cement mortar, made in the proportion of one part of cement to one part of sand. This should be higher at the center than at the ends of the culvert, in order that drainage may be perfect. Concrete is porous, and unless coated with a waterproof covering, is certain to be greatly injured by moisture dripping through it.

In order that concrete will not adhere to the forms, they should be coated with oil before the concrete is put in place. A combination of crude oil and kerosene applied with a brush gives good results, but an excess should not be used. For all exposed faces of the concrete, dressed lumber should be used, and it should be cleaned and re-coated with oil at each setting.

Every care should be taken to see that the inside of the forms is free from shavings, sawdust, blocks of wood, or other debris, before putting in the concrete. A warning of this kind would seem almost superfluous, but there is evidence of no more common neglect than this. Time and again, in important work, the writer has found blocks of wood projecting from the concrete. Spacing pieces also should be removed. Neglect to do so is merely evidence that the workmen are anxious to get rid of their job in the easiest possible way, regardless of consequences.

The reinforcement shown in the flooring of this culvert should be of round steel rods. There is a common impression that any kind of iron will do, but this is an error. The steel is used to give tensile strength where tension of the concrete is likely to occur. Concrete is strong in compression, but is weak in tension. Wherever it is the tendency of loads passing over a culvert to bend a slab, tension takes place on one half, and compression on the other. The steel should be placed so as to equalize the compressive and tensile strength of the concrete. In the case referred to, steel rods with ends bent at each end, are placed across the culvert 1 1/2 inches from the exposed face, both bottom and top. A coating of concrete 1 1/2 inches in thickness will effectually protect the steel from rust. The steel used should be free from oil or grease. A thin layer of rust is not objectionable, but loose or scaly rust should be removed with a stiff wire brush. The concrete should be well consolidated and placed in close contact with the steel.

On the sketch accompanying this article, a clear width of driveway of 20 feet is shown. There is a tendency to make short-span bridges too narrow. A driveway 16 or 18 ft. wide may be sufficient for long steel or other bridges, which are in plain view at all times; but for smaller waterways, the sides of which are not prominent



Hampshire Down Ram Lambs.

First and reserve champion pen, Royal Show, 1909.

on the highway, the width should be such as to minimize the tendency to drive over, or strike the hand rail. Where tile culverts are used, it is the practice in some municipalities to carry them the entire width of the highway. In this way, an absolutely safe crossing is provided. Hand rails on all culverts are important. They add to the safety of a bridge; and much attention should be given to their appearance, as this is the only part of the work to be seen by the travelling public. Strongly-built railings of good appearance give a feeling of safety and security in passing over the bridges, and with little, if any, added expense, they may be made a matter of ornament to the highway.

A discussion of bridge-building, using concrete and steel, with a view to enabling the average councillor or pathmaster to draw up plans and specifications for all bridges, must, of necessity, be a misdirected effort. Bridge-building is strictly within the sphere of the civil engineer, and efforts to discount this fact are foredoomed to ultimate failure. The skillful and experienced farmer looks with amusement upon attempts at farming made by inexperienced men who take up farming after a life spent in professional work. The newly-arrived "remittance man" is an example of such farming. When will councillors realize that their own well-meant attempts to build steel and concrete bridges without trained advice is equally enjoyable to the man who thoroughly understands bridge design?

A common practice is for councils to advertise for tenders, upon which steel-bridge companies submit alleged strain sheets, specifications and prices. Having little or no other experience and training to guide them, the work is awarded according to price. The lowest tenderer receives the contract. Price is the sole basis upon which judgment is formed. For a difference of \$5.00 in price, a bridge may be rejected in favor of one having \$1,000 less value. A premium is thus put upon inferior work. Having awarded the contract, councillors, without engineering training, are unable to determine to what extent even the plans and specifications submitted with the tender have been followed.

When a bridge is required in a municipality, the proper procedure is to at once employ a civil engineer experienced in bridge construction. He should prepare plans for the substructure, including abutments and piers. He may himself prepare complete plans and specifications for the steel superstructure; or, without preparing plans, he may submit such specifications in calling for tenders that all bridge companies will compete on a uniform basis. By the latter course, each company is free to submit its own design, which must, however, be prepared under a fixed specification as regards strength. Having received tenders for the work, the engineer is in a position to decide upon the most favorable tender. He will further scrutinize details of connections, etc., and will see that the bridge is erected in accordance with the specifications. The services of a capable engineer will commonly double the life of a bridge, as compared with a contract that is let without proper supervision. In the preparing of plans for abutments and piers, he can frequently save sufficient material to pay for his services. Bridge construction is a work requiring mathematical training, as well as practical judgment and experience, and to this end it is most desirable that the public be thoroughly conversant with the fact that councillors should not be expected to erect steel and concrete bridges without the services of a trained and experienced man to guide them.

The strength of bridges is a matter for considerable readjustment in Canada. The common practice is to build them just strong enough. Having future requirements in view, with materials that may last almost forever, it is only good judgment to build our bridges stronger than strong enough. Methods of traffic and transportation are rapidly changing. Motor traffic has been applied to rural transportation, and it is the belief of many that it will in the near future be adopted in Canada. This will mean on our country roads largely increased loads. The weight of rural traffic, through traction engines, is steadily demanding stronger bridges, and what the future may produce it is impossible to foresee. Other than that, with increasing population and improved means of traffic, bridges should be built capable of carrying very much heavier loads.

W. A. McLEAN, Engineer of Highways,
Department of Public Works, Toronto.

Fearless and Practical.

I enclose herein \$2.00, to cover renewal of my subscription. I consider "The Farmer's Advocate" the most practical farmers' journal I ever read. I have been receiving farm papers these thirty odd years, and never yet received one that could say its say so thoroughly and fearlessly as "The Farmer's Advocate." Wishing you years of continued success.
VIRGIL McKENNA,
Carleton Co., Ont.

In filling the silo, remove the ears from the last few loads, in order to reduce by that much the loss that results from decay of the top layer.

Erecting a Short-stave Silo.

Editor "The Farmer's Advocate":

Before commencing to set up the staves, strike a circle, to show the exact place on the foundation that the outside of the stave should rest when in place. This is a great help in keeping the tub round, and at equal distances from the edge of the foundation all the way around.

Next raise the door frame, and stay it securely in every direction, being careful to plumb it first, of course.

Now commence with, say, a six foot length of stave and nail it lightly into the frame about the center; next, put a twelve-foot plank against the six-foot piece, and secure it with one nail, keeping bottoms to the line, and thus proceed right around with long and short, alternately, until the door is reached on the opposite side, when the bottom hoop is got into place and tightened slightly; next, the second and third are put on, and also tightened slightly, just enough so that the staves are secured from falling out.



Three-horse Two-row Corn Cultivator.

At work on the farm of J. A. Fletcher, Kent Co., Ont. Constructed, and patented in Canada and United States, by J. A. Fletcher, 1909.

Now a man mounts the door-frame, and commences to mark the height of the fourth and fifth hoops on the twelve-foot staves, using the six-foot pieces as footholds; and, having completed the journey around, these hoops are put on, and held up with a nail here and there. These are scarcely tightened at all just then, but are all put to proper place, with buckles on, ready to screw up when the right time comes.

Now a man goes up the door-frame to the top of the twelve-foot staves in place now, and as each twelve-foot length is handed up, he inserts the end in the space between the lower long staves, and quite easily shoves it down, until the ends of the six-foot stave and it come together. Using this stave as a means of steadying himself, he proceeds to put another in place, and in this way completes another round, upon which the fourth and fifth hoops are tightened considerably more, to give stability to the staves upon which the builder stands.

Now the sixth and seventh hoops are put in place, in the same manner as the fourth and fifth were, and another round is made with twelve-foot staves, which completes the height of the silo

for these staves, if it be a 21 foot silo, as this makes two lengths of twelve-foot staves, only leaving a six-foot piece to be inserted in every second place to complete the whole top part of the silo.

Next, the hoops are all securely drawn up by a man on a ladder, and, after driving each stave from the top end with a heavy hammer, the silo is ready for filling. This method dispenses completely with scaffolding, and is much more speedy than would be imagined. Three good men being able to erect a 14 x 21-foot silo in a day.

I always have all hoops run through an ordinary tire-bender, so they will fit silo without further bending, thus saving much labor when erecting.
A. A. GILMORE,
Huntingdon Co., Que.

Husks with Shredder.

Editor "The Farmer's Advocate":

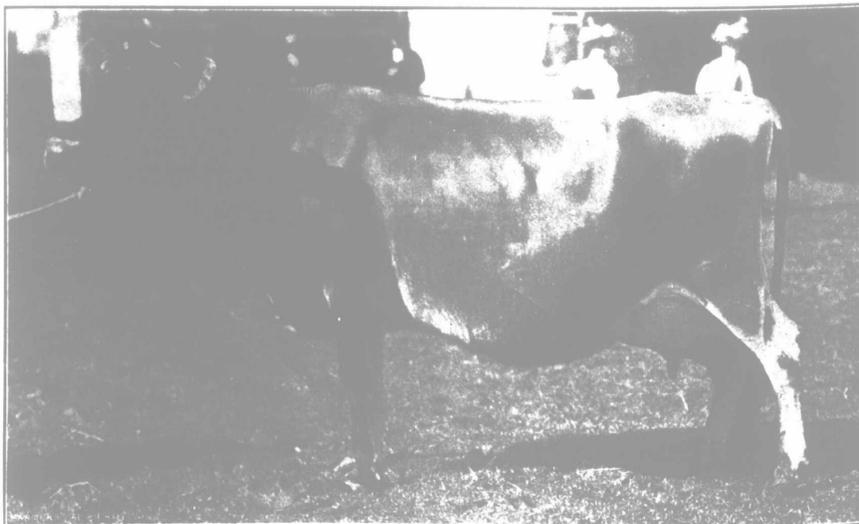
We begin harvesting the corn crop when the grain is nicely glazed, which with us is generally between the 10th and 20th of September. We cut with a corn harvester, as it is far easier for the men, and they can do the work much more quickly. The corn is also in a much better shape for drawing to the shredder or barn. A harvester drawn by three horses can cut from six to eight acres per day, and it will take two good men to shock up after it.

If cut with the harvester, we put eight rows of corn in one row of shocks, 16 sheaves in each shock, probably about 80 hills to one shock. If cut by hand, there are 36 hills in a shock. The first band of twine is put on just below the strap, which we use for drawing the corn up tight, and we always put another band near the top of shock. The top band helps the shock to stand up much better, and it also keeps out the rain.

When husking is done in the field by hand, the corn should be cribbed every night, and the stalks should never be left in the field long enough to be rained on. If it is not a rainy time, the stalks should be drawn in every other day, and stood up on end in the barn.

A good corn crib is the best place to store the ears of corn. In the winter it is a good plan to tack coarse sacking on the outside of the crib to prevent the snow from filling into it.

For seven years we have husked and shredded our corn at one operation, and in that time we have not lost more than a ton of fodder from moulding. It is certainly a quick way to get the work done, and when the shredding is finished your corn is in the crib, and the stalks in the mow in good shape for feeding. Estimate cost of cutting and shocking one acre of corn, \$1.00;



Tiber 2nd.

First-prize Jersey cow at the Royal Show, 1909.

husking, shredding and twine, \$6.75; total, \$7.75 per acre. A. W. DeLONG, Oxford Co., Ont.

THE DAIRY.

Mountain View Cheese Factory and Cool-curing Room.

A model cool-curing room has been provided at the Mountain View Cheese Factory, in Prince Edward Co., Ont., owned by the Mountain View Cheese and Butter Association, the manager of which is Jas. R. Anderson, treasurer of the Eastern Ontario Dairymen's Association. The Mountain View factory was described in "The Farmer's Advocate" last winter, issue March 11th. An attractive and neatly-finished cement building contains every appliance and facility for cheesemaking, and is kept in first-class condition by the maker, John Hall, who has charge of his first factory this year. A pleasing feature, not too common to be noteworthy, are the potted plants adorning the windows. The factory was reconstructed in 1903, the ice-chamber being added in the winter of 1905-6. An emergency press-room contains shelving to keep the cheese a day, in order that they might dry before being put into the curing-room. The temperature of the curing room on August 12th was 56 degrees. It was in perfect condition, dry and free from mold. The cheese made a neat appearance arrayed on flat tables, instead of the rack shelving commonly in use. The old curing-room of this factory was fairly well insulated, and provided with a cold-air or sub-earth duct, but there was some dampness, and the cheese molded. Then the ice-chamber was built and the insulation improved, at a cost of \$900 to \$1,000. The dimensions of the cool-curing room, as given by the secretary, are 28 x 28 feet, with a 9-foot ceiling; ice-chamber, 18 x 28 feet, with an 11-foot ceiling; make-room, 28 x 40, with an 11-foot ceiling; emergency press-room, 21 x 28 x 7 1/2 feet. Total cost of factory, \$6,000.

The Mountain View factory has a covered whey tank; the enclosure, made of corrugated iron, cost \$62 for material and work. The whey is skimmed and pasteurized by ejecting it twice. The first ejection into the tempering pan of the separator heats it to 140 to 144 degrees; then, after running from the separator into a cement trough, it is again ejected to elevate it to the level of the lower whey tank, 250 feet distant. This raises it to 162 degrees, or over, which is rather too high, as it coagulates a portion of the albumen. As the warm whey froths considerably running through this long pipe to the whey tank, an opening was made midway along its length, and a piece of the intake pipe used for the sub-earth-duct system formerly in vogue to cool the curing room was improvised to catch the foam sputtering from the open pipe. We understand it is the intention to move the whey tank up closer to the factory. The sanitary conditions about the factory and whey tank leave little to be desired, although within the memory of the present generation it was one of the dirtiest and most ill-smelling places in the county.

On August 12th, this factory was making 13 cheese per day, being a drop of four cheese from the flush of the season's delivery. The make last year was 89 tons.

As instancing the loss in yield of cheese from overripe milk, Mr. Hall informs us that, on August 11th he had half a pound more cheese than he had the day before from exactly the same amount of milk delivered in a somewhat sour condition. The cheese in this factory were found to be nicely finished, with a close body, fine, silky texture, and good flavor. The patrons, however, while pleased with their curing-room, have been somewhat disappointed to find that the yield of cheese per thousand pounds of milk has not improved since the cool-curing room was built, as they expected it would. This, however, is probably due to other influences. In the first place, we were told that there has been a tendency throughout the neighborhood for the yield to increase, and the cool-curing room would have to overcome this tendency before a betterment could be shown. Some speculation has been indulged in as to the cause of the increase, but it may be

due to the change in the breeding of some of the cows; this is more particularly probable at the Mountain View factory, where they had formerly paid by test, but discontinued this system in favor of pooling. Another factor that probably had something to do with the result was the change of makers. Mr. Hall, who is at present in charge, is making a firm-bodied cheese, incorporating probably less moisture than might fairly be done. All these factors tend to offset the advantage of cool-curing, which has undoubtedly reduced the shrinkage at this as at other factories.

The Cow Banishes Romance.

Editor "The Farmer's Advocate":

I have read with much interest, in a recent issue of your paper, an article headed "A Barn-raising," taken from the Toronto Globe. The description is a very vivid and realistic one; nothing is omitted. The writer has evidently "been there." I think, however, he is a little astray in his description of the wind-up, if he is speaking of present-day customs. The post-prandial part of the programme, at least in this section of the country, is a very different affair from what he has described it to be. Instead of lingering to talk to the girls, play baseball, or trip the light fantastic toe, as he says, the male portion of the gathering, as soon as the last mouthful is bolted, grab their hats and hustle home to milk. The young farmer of to-day has no time to stray in the gathering twilight, under the love-inspiring moon, past the scented clover, causing him to exclaim with the poet, "how dear to me the hour when daylight dies." Instead, he must spend those softening hours in the stuffy air of the cow stable, milking the cows, with his throbbing head close to their heaving sides. An hour or two of this strenuous work, and he is in no condition to appreciate the strains of the waltz played by the college graduate; not even the inspiring notes of the "Irish Washerwoman" can "lull the fever of his breast."

Now, sir, they tell us that celibacy is increasing and sociability is waning, and I claim that the dairy cow has done more to banish romance and sociability from modern country life than all other causes combined. She is the greatest bar to pleasure and the main cause of race suicide. Now, these may seem rather sweeping statements, but I believe them to be true, and challenge successful contradiction. OXFORD COUNTY.

Eastern Ontario Dairy Progress.

Eastern Ontario, viewed from the standpoint of cheese production, divides naturally into three main districts, said J. A. Ruddick, Dominion Dairy & Cold-storage Commissioner, addressing the Dairymen's Convention at Prescott last January. What he designates the Central Ontario District, comprising the Counties of Prince Edward, Hastings and Peterborough, was the first part of Eastern Ontario to win prominence in cheesemaking, the product of this section early acquiring a good reputation on the British market, and winning it recognition as a leading center twenty-five or thirty years ago. Having attained that position, however, the dry-rot of self-satisfaction set in, and ere many years the Belleville section was obliged to yield the palm to the Brockville district. The beginning of the cool-curing movement found this region in a receptive mood, ready to take steps to regain its lost position, and within the past five or six years, some thirty cool-curing rooms have been fitted up in the Central Ontario district, and this territory, notably the County of Prince Edward, has again become famous for the excellence of its factory conditions and the superior quality of goods produced. The cool-curing germ of progress has paved the way for others, so that cow-testing, use of soiling crops, and provision by patrons for cooling their milk, have been adopted to a considerable extent in this area. A general renaissance of dairying has set in.

The editor of "The Farmer's Advocate" had the pleasure, recently, of visiting a number of cheese factories in Prince Edward and Hastings Counties, in company with Chief Dairy Instructor Publow, in quest, particularly, of information concerning experience with cool-curing rooms, and was pleased to observe the many evidences of progress. Neat cement-block and well-painted frame factories, covered milk-stands on the farms, with wells or ice to cool the milk in many instances; numerous, if not very large, fields of corn, thrifty cows of promising dairy breeding, and, in Hastings County particularly, flourishing crops, favored by a propitious season, left an impression that here dairying was being prosecuted in earnest. A few facts picked up may be appropriately recorded here.

* * * *

Eastern Ontario, in 1908, made 89,230,812 pounds of cheese, the cash value of which was \$10,525,665.96. Of this, 4,401,854 pounds, worth \$527,936.85, were made in Prince Edward County, while the product of the neighboring County of Hastings ran up over a million and a quarter dollars, rivalling Oxford, the banner county of the West. The exact figures for Hastings were 10,384,243 pounds, valued at \$1,227,018.21. The total number of cheese factories in Eastern Ontario is 945, and of creameries, 28.

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About 60 factories in Eastern Ontario are this year pasteurizing their whey, and additional ones are commencing from time to time. Some are doing it well; others

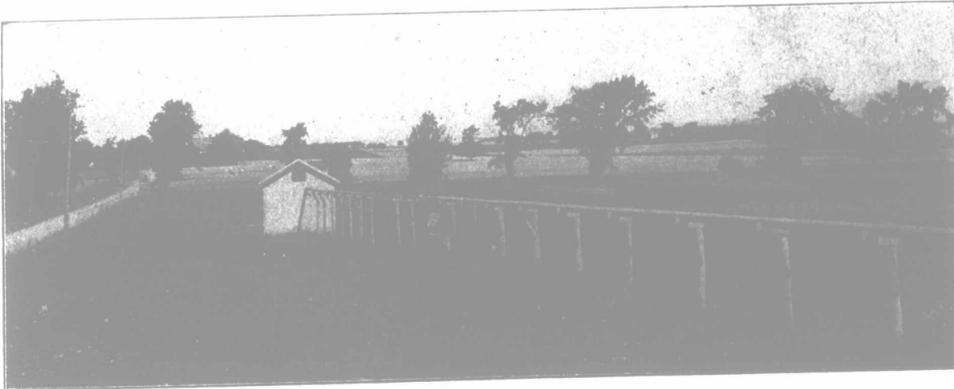
not so well. In a number of cases, where they were advised to pasteurize in order to overcome bitter flavors, they are doing it pretty thoroughly. Some are trying to pasteurize in their lower tanks, and then wash-water and drippings from the vats inoculate the whey that has been rendered comparatively free of germs and yeasts by pasteurization. On the whole, however, the experience is satisfactory, and Chief Dairy Instructor Publow is of the opinion that the three things now needed in the cheese business are cool-curing rooms at the factories, cooling of milk by the patrons at their farms, and the pasteurization of whey.

* * * *

At the King factory, in Hastings Co., the intention is to put in a septic tank, to treat factory sewage after the manner of the experimental plant at Colborne. This factory is favorably situated for the running of a septic tank, being right along a creek into which the drainage water may run. The experimental septic tank in Eastern Ontario is working quite satisfactorily, and Mr. Publow anticipates that similar plants will be quite generally installed in the course of a few years.

* * * *

Out of 21 cheese factories in Prince Edward



A Covered Whey Tank.

At the Mountain View Cheese Factory, Prince Edward County, Ont. Covered whey tanks are not unusual in Eastern Ontario.

Buttermilk as a Beverage.

Buttermilk is a beverage of deserving and growing popularity. It is refreshing, palatable, wholesome, and particularly effective in cutting and raising phlegm from the throat, as after a hot drive on dusty roads. When used in quantities, it has diuretic properties, which may be a slight disadvantage in health, but would rather enhance its value than otherwise in many cases of disease. It is rich in protein, and is very easily digested, owing to the small percentage of fat, and to the fact that its casein is present in a finely flocculent form. It is widely sold over hotel bars, and the proprietor of a palatial house in a Canadian city informed us recently that it was "knocking out" all the other soft drinks. His difficulty was to obtain an abundant, regular supply of first-class quality, though willing to pay cheerfully twenty or twenty-five cents a gallon. As this is more than the value of whole milk for purposes of making cheese or butter, notwithstanding that it contains but little more fat than skim milk, there would seem to be an opening for somebody to exploit a profitable field of business by establishing a creamery, with buttermilk as a specialty, and butter as a by-product.

County, nine have cool-curing rooms, with ice-chambers in connection, while, of the remaining curing-rooms, two are quite well insulated, maintaining a more equable temperature than is found in the average factory curing-room. The nine factories that have cool-curing rooms average larger in amount of make than the remaining ones, so that half the cheese made in the county are cool-cured. Probably, in large part, as a result of this, prices on the Picton cheese board are the highest paid in the Eastern section of Ontario.

* * * *

While, in the main, the practice in cheese factories is similar in both Eastern and Western Ontario, there are minor points of difference. For example, in the West the practice is to syphon off the whey at dipping; in Eastern Ontario, on the other hand, they use the whey-gate in almost every factory. The whey-gate is simply a large metal faucet, and draws the whey off from the bottom of the vat. In a very few cases both whey-gate and syphon are used, especially where the former is found not large enough to handle a fast-working milk.

* * * *

In a number of factories where the whey is being skimmed for the purpose of buttermaking, a commendable feature observed is the galvanized-iron trough lying loose in the cement gutter into which the whey is run at dipping. It would be a good thing if this were provided at all the factories, instead of running the whey directly into the gutter, allowing it to overflow and spread over the floor, as it commonly does, thus washing the floor, it is true, but introducing considerable dirt and impurity into the whey. This is bad, not only for the stock, but for the quality of the cheese made from milk delivered in cans in which this impure whey has been returned. Mr. Publow says: "I find that where they have cement gutters, these often get roughened along the edges, and then it is almost impossible to get them clean. Should there be any yeasts about the factory or in the milk and whey, they lodge in these roughened surfaces and go on developing there, seeding each day's whey, which, being returned in the patrons' cans, and rarely or never eliminated by the washing which is given them, perpetuate the trouble in the vats from day to day." Besides, it is well that the by-products should be returned in a sweet and wholesome condition for feeding stock.

Dairy Building at the Western Fair

The Dairy Building at the Western Fair, London, Ont., promises to be of unusual interest. The buttermaking contest will commence on Monday, September 13th, at 2 o'clock, when Section Number One will be competed for by strict amateurs, open only to those who have never spent any time in a dairy school or creamery. These competitions will take place each morning and afternoon during the week. Lectures will be given during the competition on the work as it is done, which will be both interesting and instructive. In addition to this, there will be given daily, by Frank Hens, Secretary of the Western Ontario Dairymen's Association, practical demonstrations of the care and cooling of milk for cheese-factory purposes. This is something that will be of great value to farmers and cheese-factory patrons throughout the country, as the cheese industry is one that brings nearly a million dollars into the pockets of farmers in this country every week. Ample accommodation has been made to seat large crowds, who will watch this process with great interest and profit. The cheese and butter entries are coming in very fast, and, from present appearance, there is every indication of a very large exhibit, which, with the above, will make the Dairy Building one of special interest this year.

Says the Trade Bulletin of Montreal: "There is no gainsaying the fact that the farmers of Canada have been receiving 11½c. on an average for their fall cheese, whilst 9½c. to 10c. yields them splendid profits." Of course the Trade Bulletin knows. However, it is probably thinking of conditions five or ten years back. But seems to us we have heard a whisper in certain quarters of recent years that cost of production was increasing in various lines. If the editor of our esteemed contemporary will readjust his monocle he may perceive that a similar trend has affected the profits of the dairy farmer.

The Department of Customs, Ottawa, some weeks ago, made a seizure of imported oleomargarine at a fishing station in the Gulf of St. Lawrence. All butter substitutes are on the prohibited list of the Customs Act.

POULTRY.

Profit in Eggs from a Farm Flock.

Two thousand two hundred and seventeen dollars and forty-five cents in 17 years, or an average of \$130.49 per annum, is the record of egg sales made by Mrs. R. J. Temple, Middlesex Co., Ont., from an ordinary farm flock of 80 to 85 hens, the number never exceeding 100, and being this year as low as 70. This takes no account of eggs used for hatching, nor of a liberal supply consumed at home.

Mrs. Temple is a born poultrywoman, combining with love of her charge, quick perception and keen business instinct. Her husband shares her interest, though the revenue is at her disposal, and serves to run the table. She tells us that she does not know what it means to ask her husband for money to buy groceries. Half the egg sales are turned over to Mr. Temple to pay for



A Neat Country Home.

Residence of R. J. Temple, Middlesex Co., Ont.

feed consumed, and he considers himself well paid. That leaves a nice annual profit from the flock. And yet there are those who say that poultry does not pay. It depends on the management.

The proprietor of this profitable business flock has run the gamut of poultry-keeping, having had experience with ducks, geese, turkeys and table poultry, finally settling down to the conclusion that the only profitable branch of the business is egg production; and, as for breed, she will have none of the Rocks or heavier breeds of table fowl, but ties to a strain of mixed blood in which Black Minorca predominates. "It's a grab game with turkeys," she declares. "You have them, and you haven't them. There is no money at all in ducks or geese, while table poultry eat their heads off before they are ready for market." No turkeys or ducks have been kept for six years.

Barred Rocks were the breed of chickens formerly kept, but for a number of years back she has been gradually getting into the present line, produced by crossing a Minorca male on stock of mixed Rock and Black Wyandotte breeding. This has produced a black flock, of uniform shape, bright-eyed, active, and capital layers. Last year the sales of eggs from a flock of 80 hens and pullets amounted to \$138.76. Account was not kept of the exact number of eggs laid, but on-

twelvemonth, eight or nine years ago, 1,027 dozen were sold from about 90 hens, an average of about 137 eggs per hen. They were, however, somewhat forced that year.

The chickens are housed in an old shed opening into the barnyard. A good roof covers a straw loft. The walls are double-boarded on two sides, and tar-papered all round. In summer the birds have the run-of yard and fields, though kept away from the house and front yard. In winter their feed is about as follows: Mash, composed mostly of bran, with a little chop, mixed with skim milk, is fed once a day. The grain consists of wheat and oats, with some corn in cold weather. Meat is given about once a week. Bone broken with a sledge-hammer is frequently added to the mash. Mica grit, sand and gravel are mixed together in a square box, and the hens allowed to dust in it. Once a week or so the poultry house is thoroughly fumigated with sulphur. Mr. Temple also burns sulphur frequently in his horse and cow stables, and to this at-

tributes the escape of an epizootic of distemper among the horses of the neighborhood last winter.

Hens are used for hatching, and only enough set to bring out a sufficient quota of pullets to replenish the laying stock. Bunches of tansy are hung around the sitting compartment to keep lice away from the hens. Let it dry thoroughly; powder and dust the sitter.

Like all good poultry-keepers, Mr. and Mrs. Temple smile when treatment of sick birds is mentioned. "We hardly ever have a

sick bird to doctor," they say, "and when one is ailing, it is usually killed and buried." The secret of treating disease in poultry is to give it such care that there will be nothing to make the birds sick.

With such methods of production, conjoined with strict attention to regular gathering of the "fruit," marketing is a simple problem. Mrs. Temple is not the kind of a woman to make a drudge of herself by getting up at four o'clock in the morning, going to town, and standing, worn and dishevelled, around a city market all forenoon soliciting purchasers. She has for years sold her eggs in bulk to a storekeeper in Pottersburg, near London, guaranteeing every egg, and obtaining, we presume, highest cash price.

The writer has on several occasions had the satisfaction of sampling the product, and can vouch for the flavor, as well as the freshness thereof. With every storekeeper thus supplied, poultry-keeping would yield larger profits, while the boiled egg would become a regular delicacy on many breakfast tables where it is now foregone, for fear the breakfaster may break the shell, to hear a rooster crow, or smell something worse.

The accompanying verses, expressing some of Mrs. Temple's dominating sentiments on the subject of poultry-keeping, were not composed by the editor. We are at pains to disclaim the author-



Part of Mrs. R. J. Temple's Flock of Egg-basket Fillers.

This is Mrs. Temple's poultry flock. She has no use for the Barred Plymouth Rock. She will have it, she says it's true. They're of a big and lazy crew. A Barred Rock cockerel happened to say, "I'm as nice as a turkey on Christmas Day." "True, but that is a long time to wait for you."

"I have something else to tell you too— One of our eggs is as large as Minorca's two." "I want you," she says, "to bear in mind, I have the Black Wyandotte in my kind." So she sticks to it as firm as a block. There is no money in the Barred Plymouth Rock.

SEPTEMBER 2, 1909

ship, lest we might be under the painful necessity of declining to describe other people's poultry flocks in verse.

Desiccated Eggs.

Notice was taken, in "The Farmer's Advocate" for January 9th, 1908, of a reference in a commercial report by J. S. Larke, Canadian Trade Commissioner in Australia, to the process of desiccating eggs, said to have been devised at Melbourne, by which the yolk and albumen were dried and reduced to a powder, and so preserved for food. In the weekly report of Trade and Commerce, just received, Mr. Larke again refers to this process. The thing is a failure, at least for the present. The company which made the experiment has gone into liquidation, and the machinery has been offered for sale, without finding a buyer. Mr. Larke suggests that possibly some ingenious Canadian might change failure into success. Of that, there is not much hope. As we noted last year, an attempt at such a process had already been made in Canada, in the vicinity of Stratford, which proved, like the Australian attempt, a failure.

Poultry House for 500 Hens.

Will you please send me plans through your paper for a poultry house large enough for five hundred hens. I wish to go in for eggs alone. Send plans as to how it should be laid off inside for the benefit of getting eggs the year around, if fed well.

J. C. DAWSON.

I would recommend, in this case, a style of poultry house similar to that adopted by the Poultry Yards Company, of Pembroke, Ont. Houses of this description have been in operation at Pembroke for five years past, and have given every satisfaction. The apartment or pen described is one of a long row of either twenty pens holding 25 fowls each, or twenty-five pens holding twenty birds each. Or, the building may be divided into two. But, for convenience sake, especially in winter, the single long building is preferred by many. The description of an apartment is as follows:

Each colony of fowls occupies one pen, 10 x 16 feet in size. In the south end of the pen there is a window 4 feet square. Above and below the window there is a frame covered with cotton, one foot deep by four broad. The air through these cotton openings is diffused through the pen without draft, while light and sunshine find their way through the window. The ventilation by this means is considered most satisfactory. The floor of the pen is cement, and is covered with the usual quantity of litter. The ceiling is slatted, and above the slats, straw, to a depth of twelve inches, is placed, for the purpose of absorbing moisture. During the coldest period of the past winter, I was assured that there had been no moisture in any of the pens, and this result is attributed to the straw and ventilation through cotton frames. At the north end of the pen are the roosts, platform, and underneath the latter, the nests. In front of the roosting-place, there is a cotton-covered frame, 6 x 8 feet. This frame swings to the wall, and is only used on very cold nights for the purpose of keeping the fowls comfortable. A four-compartment hopper contains grit, oyster-shells and charcoal. Whole grain is thrown in the litter on the floor. Drink-water is regularly supplied, and, from time to time, meat and vegetables. Cases of sickness have been rare. In each pen, to the left of the roosting-place, there is a small, crated enclosure, to hold two male birds for use during the breeding season. Allow no less than six square feet of floor-space for each hen.

Enclosed you will find order for \$1.50 for "The Farmer's Advocate." It ought to be named "The Farmer's Bible." If all farmers would take your paper, and bind it every six months, they certainly would have a Farmer's Bible. R. J. SMITH, Wellington Co., Ont.

White Diarrhea Due to Coccidium.

The importance, not to say necessity, of artificial incubation in the economical hatching of poultry, where reared on any but a very small scale, cannot be gainsaid. Unfortunately, the sales of incubators have suffered considerably the last year or so as a result of the publicity given to certain investigations conducted at the Ontario Agricultural College and elsewhere into the subject of so-called white diarrhea in chicks. As with appendicitis in humans, this disease, though evidently not new, has attracted wide attention of late years, and, whether coincidentally or not, its occurrence has been quite generally attributed to artificial incubation and rearing. Much work has been done to discover what defect of artificial incubation might be responsible for the trouble, and the resultant notoriety has deterred a great many people from investing in incubators for fear of white diarrhea.

Dr. Byron Geo. Morse, M. D., Ph. D., V. S., who has charge of diseases of poultry and cold-blooded animals, Pathological Division, Bureau of Animal Industry, Department of Agriculture, Washington, D. C., has strenuously disputed the view that this disease, misnamed white diarrhea, was due to artificial incubation, claiming that it is really due in the great majority of cases, at any rate, to an intestinal micro-organism called a coccidium. In a recent article in the Reliable Poultry Journal, Dr. Morse discusses the whole subject in technical language, summarizing his conclusions as follows:

"So-called white diarrhea of chicks is really intestinal coccidiosis. It is not faulty incubation; it is not too low a temperature in the nursery, or too high a temperature in the brooder; it is not too early feeding or wrong diet; it is not unabsorbed yolk; it is not any one of these, nor all of them together, that cause so-

to be due to a difference in vigor or resisting-power. So far as the chances of infection are concerned, the incubator chicks should have an advantage up to the time of hatching. Subsequently they may be handicapped by the fact that incubator hatches are much larger than hen hatches, and infection introduced would run a more destructive course. Also, the brooder is not so solicitous a mother as the hen, and the health and resisting-power of the chicks may be scarcely so good as that of hen-brooded chicks. Then, again, incubators are more commonly employed under intensive conditions, where a large number of birds are kept together. Very often, the attempt to keep and hatch an increased number of chickens is coincident with or consequent upon the adoption of artificial incubation. As the quarters and range do not usually increase in proportion to the numbers, this often imposes a handicap upon artificial as compared with natural incubation.

Prof. Elford tells us that, under their conditions, he can hatch rather more successfully with the machines than with hens. However, this may not be quite a fair test, as their hens seem to have got out of the notion of hatching. The stock kept there have for seven years been incubator-hatched, and whether as a result of this or not, the hens show a disinclination to sit out the regulation period of three weeks. This year a number of them were put on eggs that had been two weeks in the incubators, and when the chicks hatched, some of the mothers did not seem to know what they were. Some ate their chicks. It looks almost as though the maternal instinct had been weakened by machine-hatching of several successive generations. Under ordinary farm conditions, Prof. Elford admits that the machine may be scarcely so perfect a hatcher as a good sitting hen, but its convenience and economy, where a considerable number of chicks are to be hatched, are so marked that the poultry-keeper cannot afford to put up with hens. With strict cleanliness and thorough disinfection of the machines, artificial incubation is a practical success, and the danger of white diarrhea is not so serious as has been represented.

Milk Chickens.

There are three periods in a chicken's life when, according to an article by Edward Brown, F. L. S., Lecturer on Aviculture, Reading, Eng., without any special feeding, its flesh is most abundant and palatable. These three stages are: (1) When from five to nine weeks old; (2) from eleven to sixteen weeks old; and (3) when seven to nine months old. Birds in the first of these stages are called in England "milk chickens"; in America they are called "squab broilers."

For the first few weeks the chickens are fed and reared in the usual way, but for a fortnight prior to killing they are specially fed, and are not allowed out, except for a short time during the day. In England, food consists of oatmeal or ground oats, alternated with cooked rice, both of which are prepared with soured skim milk and a little pure fat mixed with it. In America they are fed on a mixture of one part corn meal and two parts bran, seasoned with a little salt and pepper, and made into a wet mash, to which is added ten per cent. of cottonseed meal and some cheap syrup.

The weights attained by these baby birds vary, according to the class of fowls used and the way in which they are fed. Hamburg and Belgian birds weigh 6 to 8 ounces, English and French run from 8 to 12 ounces, while American are still larger, weighing from 12 to 16 ounces each, the standard being 12 ounces.

On many of the huge egg farms of the United States, where a large number of chickens are raised annually to keep up the supply of laying fowls, it is found profitable to separate the cockerels from the pullets as soon as the combs have sprung, which, with Leghorns, will be at the age of five to eight weeks; and, after a short period of fattening, sell them for squab broilers. The market is limited, but prices are high, from 70 cents to \$1.25 per pair being received.



A Thrifty Flock.

In England, the price of milk chickens is lower, rarely exceeding 40 cents each, but, as the estimated cost of food for a well-fatted milk chicken of nine weeks of age is but 13 cents, the margin of profit is quite large. It is not recommended that any place be run for this one object alone, but for surplus stock of large establishments, and for those who have not a heavy labor bill to meet and could make this a branch of their poultry business without much extra expense, it would be very profitable.

GARDEN & ORCHARD

Fig-growing in Canada.

The good book speaks of a land of wheat and barley and vines and fig trees.

Canada fills the bill—even to the fig trees!

It may surprise people that this is so—that a land whose snow-and-ice features have been so emphasized should grow and ripen figs, and that in the open air, and yet this is a true word. Nor



A Fig Bush Budding in the Spring, at Niagara, Ont.

is it so wonderful, when it is considered that Southern Ontario is in the same latitude as Southern France.

For nearly half a century fig culture has been continuously and successfully carried on in the Niagara peninsula of Canada, chiefly in the old Town of Niagara, where it faces Lake Ontario and the United States boundary.

The first experiments were made many years ago by F. C. Nash, who, in the early sixties, raised fig bushes in his garden near the ruined walls of the historic Fort George, so redolent of the stormy days of 1812. He first grew them in pots and placed them in a cellar during the winter.

Succeeding Mr. Nash, Henry Paffard, a well-known citizen of Niagara, and whose reputation as a gardener is widespread, entered upon the fig-raising industry, in which he was most successful, producing annually for thirty years the finest quality. When in 1901 the Prince and Princess of Wales visited the historic town on the historic river, Mr. Paffard presented the royal couple with a basket of choice figs for dessert, which were so highly appreciated that, like Oliver Twist, they asked for more. The fact reached the notice of the London Times, which drew attention to it in a paragraph which read: "The item is, of course, untrue, as it is well known that figs cannot be grown in Canada—the climate being too cold!"

So The Thunderer was mistaken, and not for the first time, for the Englishman at home has many things yet to learn of his greatest colonial possession; that of fig culture being one of them.

The climate of the Niagara section of Ontario seems to be specially suited for fig culture, and similar half-hardy plants and fruits. The effect of the lake and river waters produce exceptionally mild winters, followed by cold and sometimes backward springs, caused by the ice from the upper Great Lakes coming down the Niagara as late as May; then a dry and very warm summer and a late autumn often enables even a second crop of figs to ripen.

The system of winter protection is as follows: As soon as the leaves have fallen and sharp frosts set in, two or three of the branches are bent to the ground in their natural direction and tied loosely with some soft material and held in place by notched pegs, care being taken not to injure the bark. When all the branches are down, the whole is covered with a mound of earth three or four feet in depth, fine sand being preferable to earth, as it keeps away mice and cutworms.

In the spring, when the frost danger is passed, air is let into the mounds by holes made with a small pole, and during the succeeding ten days the

earth is taken away gradually, care being taken not to injure the bark in the process. When the bush is exposed it is generally found that the bearing wood is covered with small fruit about the size of a large pea, while the buds show but are not open.

Among the varieties that have been successfully grown are the White and Purple Ischias, the Brown Turkey and White Genoa. Those growing figs there now assert that with careful selection of varieties and proper winter protection, fig culture may be made a profitable industry all through Southern Ontario, between the Niagara and the Detroit rivers.

The Franciscan missionaries brought the first figs to North America in the eighteenth century, and for over a century the Mission fig was the only variety grown in California.

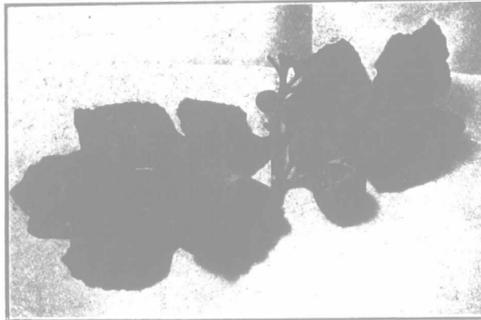
Though the fig is a native of sub-tropical countries, certain varieties may be grown in much colder climates, such as the highlands of Central Asia and Central North America, where the fig is practically unknown in its fresh state. With proper winter protection, figs will prosper in any land where peaches and apricots grow. The young plants are liable to frost injury, but after a few years they become comparatively hardy.

Different modes of protection are used as the climate varies. In the south of England and the Channel Islands I have picked figs grown on the side of walls. The bushes are covered with mats or wrapped in straw during the winter. In France fig culture is found between Paris and the Mediterranean.

The fig will grow in almost any locality or soil, though best results are obtained where the land is rich, moist, well-drained and open to the sun. Protection is, however, needed from heavy winds. A goodly proportion of lime in the soil improves the fruit.

Cuttings are both cheaper and better to commence with than rooted plants, if the former can be had in a fresh state, as they take root readily. When the fig is once settled in its location, little or no pruning is necessary—just enough to let in light and air. When branches are cut off it should be to the trunk of a tree or to a main branch.

The fig comes into bearing about the fourth year, and annually increases its yield for a long



Figs Grown in the Open Air, at Niagara, Ont., Canada.

time. Some kinds withstand the cold better than others, and are, consequently, more suitable for northern climates, and these should be preferred. The semi-dwarf variety of the Brown Turkey is said to be the most hardy of all; the Brunswick and Brown Turkey following, in their order.

The illustrations show fig culture at different seasons of the year, in the beautiful gardens of Charles Hunter, of Niagara, Canada.

FRANK YEIGL.

Canadian Apples Wanted.

The time of year again comes round when British fruit firms are anxiously looking for first-class supplies of Canadian apples, says W. A. McKinnon, Canadian Trade Commissioner at Birmingham, in a recent trade report. As usual, what they most desire is trial shipments from such parties as wish eventually to inaugurate a direct trade with them, after having first established mutual confidence. Naturally, co-operative fruit-growers' associations merit high consideration, and it would pay some of them, who are in a position to ship high-class stuff and maintain the grades, to test some markets on commission first, even though they may thus violate the cash-sale principles on which they hope eventually to do business. The services of this office are always at the disposal of the exporters.

The staff of fruit inspectors for the Dominion has been increased by the appointment of several new men, who are stationed in the Western Provinces. The large importation of American fruit into the Prairie Provinces, and even into British Columbia, has made it necessary to provide a larger staff, in order to insure that the fruit so imported is properly graded and marked, as required by Canadian law.

Reduced Rate on Boxed Fruit in Cold Storage.

Last year, the Dairy and Cold-storage Branch of the Dominion Department of Agriculture arranged to have one cold-storage chamber reserved on four steamers sailing weekly from Montreal to London, for shipments of early apples and tender fruits, the Department guaranteeing the earnings of the whole space.

This move proved so successful that similar arrangements have been made for the present season, with the exception that the steamer will start from Montreal alternately to Glasgow and London, the sailing dates being as follows: The first boat was scheduled to leave August 28th for London. Remaining sailings are: September 4th, to Glasgow; September 10th, to London, and September 18th, to Glasgow.

At the solicitation of W. W. Moore, who is acting for the Dairy and Cold-storage Commissioner in connection with these shipments, the Robert Reford Co., Limited, agents for the Thomson & Donaldson S. S. Lines, and Messrs. H. & A. Allan, representing the Allan Line, have announced a reduction in the ocean freight rate on boxed fruit shipped in cold-storage, from 30 shillings 9 pence per ton, measurement, to 25 shillings.

This will be good news to fruit-shippers, and should materially assist the Department in its efforts to build up an export trade in early apples and tender fruits.

The reduced rate will apply to London and Glasgow, and, as already mentioned, will cover fruit packed in boxes only.

Ninety-nine Per Cent. of Orchards Neglected.

R. J. Graham, the well-known apple operator, of Belleville, Ont., has been branching out rather extensively in the Maritime Provinces of late. A cold-storage warehouse has been erected in St. John, N. B., chiefly for the handling of Western fruit, while in Nova Scotia a line of six evaporators have been erected in the Annapolis Valley. On the question of the size of apple barrels, regarding which Mr. Graham had quite a debate at a meeting of the Nova Scotia Fruit-growers' Association, a year or so ago, he is still obdurate. "All the fellows in Ontario who have tried the Nova Scotia barrel," he asserts, "have gone back to the Ontario size." Concerning cultural methods in Ontario orchards, he is inclined to be discouraged. Conversing, recently, with a member of "The Farmer's Advocate" staff, he stated that not over one per cent. of the orchards in the Province of Ontario were properly cared for. Here and there may be found orchardists whose practice is a striking object-lesson, but the great majority leave their trees unsprayed and generally neglected. And then, for the crop of these stunted, unsprayed orchards, they want two or three times what it is worth. This latter clause is, of course, from the buyers' standpoint. We doubt whether

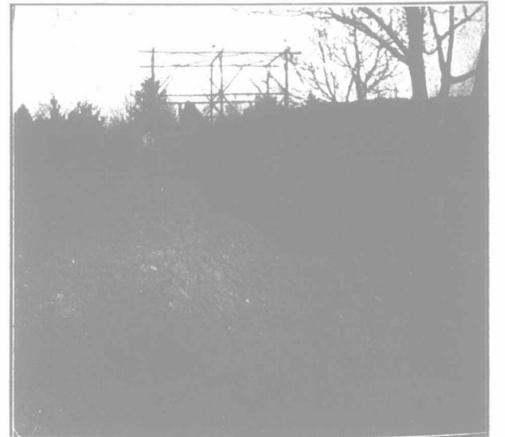


Fig Bushes Buried for the Winter In Earth Mounds, at Niagara, Ont.

many growers in Canada persuade the buyers to pay more than their fruit is worth; but there can be no doubt that, with proper, thoroughgoing methods, the crop of marketable fruit would be twice what it generally is, and the value three or four times as great.

Northwest Market for Early Apples

The Northwest draws the larger portion of the apples used during the months of August and September from the United States. The Canadian share of this trade might very well be larger than it is. A beginning has been made, certainly, but there exists a demand for well-packed early apples that is not appreciated by Ontario fruit-growers. Prices average higher than for the best winter apples.

Boxes vs. Barrels for Apples.

The St. Catherines Cold-storage Company have shipped apples to the Northwest both in barrels and boxes, and their experience is that the box trade is much the safer of the two. The Chatham Co-operative Fruit Association, also large shippers of apples to the Northwest, have almost discarded the use of barrels, and are bringing the box trade to a high degree of perfection.

THE FARM BULLETIN

Some 1909 Fair Dates.

- Alaska-Yukon-Pacific, Seattle—June 1 to Oct. 16.
- Canadian National Exhibition, Toronto—August 28 to September 11.
- Western Fair, London, Ont.—September 10 to 18.
- Canada's Eastern Exhibition, Sherbrooke, Quebec—August 28 to September 4.
- Canada Central, Ottawa—September 10 to 18.
- Fredericton, N. B.—September 14 to 23.
- Nova Scotia Provincial Exhibition, Halifax—September 25 to October 2.
- Ontario Winter Fair and Horse Show, Guelph—December 6 to 10.
- Eastern Ontario Live-stock and Poultry Show, Ottawa—January 17 to 21, 1910.
- Charlottetown, P. E. I.—September 21 to 24.
- British Columbia Provincial Exhibition, New Westminster—October 12 to 16.
- Ontario Horticultural Exhibition, Toronto—Nov. 9 to 13.

The Canadian meat inspection service had on March 31st, 1908, twenty-three Canadian establishments under inspection, the number of inspectors being fifty-eight.

Look at the date on the label of your "Farmer's Advocate" once in a while. Then you will know when it is time to renew your subscription.

Probable Crop Yields in Ontario.

The following statistics of the principal field crops of Ontario for 1909 show the acreage, as compiled from individual returns made by farmers, to the Ontario Bureau of Industries, and the yields, as estimated by an experienced staff of correspondents, embracing every township:

Fall Wheat—663,375 acres, yielding 15,996,562 bushels, or 24.1 per acre, as compared with 679,642 acres, 16,430,476 bushels, and 24.2, in 1908. The average for 27 years was 20.7.

Spring Wheat—135,161 acres, yielding 2,215,314 bushels, or 16.4 per acre, as compared with 142,124 acres, 2,197,716 bushels, and 15.5, in 1908. The average for 27 years was 15.9.

Barley—695,262 acres, yielding 18,273,285 bushels, or 26.3 per acre, as compared with 734,029 acres, 20,888,569 bushels, and 28.5, in 1908. The annual average was 27.7.

Oats—2,695,585 acres, yielding 87,966,527 bushels, or 32.6 per acre, as compared with 2,774,259 acres, 96,626,419 bushels, and 34.8, in 1908. The annual average was 35.7.

Peas—381,609 acres, yielding 7,842,927 bushels, or 20.6 per acre, as compared with 396,642 acres, 7,401,336 bushels, and 18.7, in 1908. The annual average was 19.4.

Beans—45,029 acres, yielding 857,663 bushels, or 19.0 per acre, as compared with 46,477 acres, 783,757 bushels, and 16.9, in 1908. The annual average was 17.1.

Rye—94,661 acres, yielding 1,594,868 bushels, or 16.8 per acre, as compared with 87,908 acres, 1,453,616 bushels, and 16.5, in 1908. The annual average was 16.4.

Hay and Clover—3,228,445 acres, yielding 3,885,145 tons, or 1.20 per acre, as compared with 3,253,141 acres, 4,635,287 tons, and 1.42, in 1908. The annual average crop was 1.46.

The following are the areas of crops for which the estimated yields have not as yet been attempted for 1909:

	1909.	1908.
Buckwheat	176,630	140,605
Corn (for husking)...	322,789	299,690
Corn (for forage) ...	288,346	233,763
Mixed grains	474,530	456,049
Potatoes	169,695	166,974
Mangel-wurzels ...	70,488	67,937
Carrots	3,506	4,080
Sugar beets	19,812	17,453
Turnips	113,400	120,920
Pasture	3,180,780	3,326,169
Summer-fallow	231,707	Not taken.
Orchard	300,364	
		325,550
Small fruits	24,614	
Vineyards	11,420	11,705

Statistics of live stock on hand, July 1st:

	1909.	1908.
Horses	728,308	726,471
Milch cows	1,075,496	1,113,874
Other cattle	1,593,083	1,711,485
Sheep and lambs ...	1,130,667	1,143,890
Swine	1,551,187	1,818,763
Poultry	12,086,580	12,286,613

Live stock sold or slaughtered in year ending June 30th:

	1909.	1908.
Horses	76,461	71,214
Cattle	800,228	798,062
Sheep	533,441	545,820
Swine	1,980,432	2,129,944
Poultry	4,177,583	4,108,750

Robert Meighen, President of the Lake of the Woods Milling Company, in a further interview, disclaims advising farmers to hold their wheat. What he would warn against is rushing the crop on the market as soon as threshed. Both Ontario and Western farmers would do better if deliveries of wheat were more moderate.

GOSSIP.

The thirty Berkshires sold at auction on August 19th by B. E. McMillan at Blanchard, Iowa, made an average of \$68.90, the top prices being \$300 and \$250, and the lowest, \$20.

The directors of the National Horse Show, New York, at a recent meeting, unanimously decided to offer \$10,000 additional in prizes for the highest types of Clydesdale, Percheron, Shire and Belgian horses shown at the exhibition at Madison Square Garden in November next. Alfred G. Vanderbilt, who presided, said, "As the drafter is primarily the farmer's horse, and as the farmer is the backbone of the country, it should be the principal object of those having the interest of horse-breeding at heart to develop the class of horses which will do the majority of the people the most good."

LIST OF JUDGES FOR LIVE STOCK, WESTERN FAIR, LONDON, 1909.

- Horses—Thoroughbred and Saddle Horses, W. H. Millman, Toronto; Hackney and High-steppers, Hugh Darroch, Harriston; Carriage and Coach, Thos. Roulston, Toronto; Roadsters, Nathan Wade, Bothwell; Clydesdales and Shires, Jno. Boag, Queensville; Heavy Drafts, Percherons and Agricultural, J. McDermaid, Lucknow; Ponies, J. McPherson, London.
- Cattle—Shorthorns and Fat Cattle, Thos. Russell, Exeter; and Robert Miller, Stouffville; Jerseys, F. L. Green, Greenwood; Ayrshires, Geo. McCormick, Rockton; Holsteins, A. C. Hallman, Breslau; Herefords, Polled Angus and Galloways, T. E. Robson, London; Beef Grades, T. E. Robson, London, and Thos. Russell, Exeter; Dairy Grades, F. L. Green, Greenwood, and A. C. Hallman, Breslau.
- Sheep—Shropshires, Albert Shields, Caistorville; Oxford Downs, J. E. Cousins, Harriston; Southdowns, W. H. Beattie, Wilton Grove; Dorsets, J. M. Gardhouse, Weston; Cotswolds, Jno. Kelly, Shakespeare; Leicesters, Wm. A. Douglas, Tuscarora; Lincolns, Herbert Lee, Highgate; Hampshires, Prof. G. E. Day, Guelph; Fat Sheep, Long-wools, J. M. Gardhouse, Weston, and F. Shore, White Oak; Fat Sheep, Short-wools, J. Shields, Caistorville, and W. H. Beattie, Wilton Grove.
- Swine—Berkshires, Peter McEwen, Kerby; Yorkshires and Tamworths, A. C. Hallman, Breslau; Chester Whites, D. C. Platt, McEwen; Hampshires and Any Other Breed, F. Shore, White Oak.

Owing to the serious illness of M. D. Wisdom, Superintendent of Live-stock at the Alaska-Yukon-Pacific Exposition, he has resigned the position, and Prof. W. L. Carlyle has accepted the position. Canadians who were exhibitors at the Portland Exposition in 1905, will regret to learn of the illness of Mr. Wisdom, whose kindness and courtesy was highly appreciated by all who had the pleasure of meeting him, and will join in the hope that his health may be speedily restored. The Directors of the present Exposition are to be congratulated on securing Prof. Carlyle for the position, for which his knowledge and experience peculiarly fits him.

DOMINION EXPORTS AND IMPORTS OF LIVE STOCK.

The statistics of import and export inspections show that in 1907, 642 horses, 218,045 cattle, and 180,265 sheep, and in 1908, 535 horses, 149,447 cattle, and 116,207 sheep, were inspected for export, most of the cattle going to Great Britain and most of the sheep to the United States. Of pure-bred animals inspected for import in 1908, there were 1,703 horses, 623 cattle, 2,875 sheep, and 183 swine. Of horses, sheep and swine, the large majority were from Great Britain. British Clydesdales head the list of the breeds of horses with 826, but there were also 112 Shires and 229 Shetland ponies. Cattle came principally from the United States, consisting chiefly of Red Polled (151) and Holsteins (142). Of the 2,875 sheep, 1,702 were Shropshires from Great Britain, and of the swine 114 were British Berkshires.

HORTICULTURE AND AGRICULTURE AT THE WESTERN FAIR.

A communication has just been received by the Secretary, from the Department of Agriculture, Ottawa, stating that an expert fruit-jacker will be sent to the Exhibition at London this year, and will give practical demonstrations daily of the box-packing of fruit. The display in the Agricultural Hall promises to be of unusual interest this year. All grain will be shown in boxes, instead of bags, as formerly, which will be a great improvement, as it will give a uniform appearance to the exhibit. A printed card, with the name of the different sections throughout the entire list, will be placed in a conspicuous place over the articles, thereby making it more attractive and easy to locate the different exhibits. The Vegetable-growers' Association have promised a fine exhibit this year, and as

this is a live organization, something good may be looked for. Entry blanks, prize lists, and all information given on application to the general offices.

FAIR-DATE CORRECTION.

We are informed by the Secretary of the Caledonia, Ont., Fair, that its date for this year is October 7th and 8th, and not Sept. 30th and Oct. 1st, as previously published.

Robert Hamilton, of the firm of Hamilton & Hawthorne, Simcoe, Ont., arrived home from France Sept. 24th with 20 Percheron stallions, which they consider the finest importation they have ever brought to Canada. It is their intention to make a large exhibit at the Western Fair, London, if the horses can be got in suitable condition.

At an auction sale of Percheron and Belgian mares by W. L. De Clow at Cedar Rapids, Iowa, August 18th, 19 Percherons and 3 Belgians were offered. The Percherons averaged \$697, the Belgians \$646, with \$570 as the lowest figure, and \$900 the highest, the latter price being realized for a gray Percheron four-year-old.

TRADE TOPICS.

TO EXHIBITION—GOERS.

If a booklet entitled "The Evolution of Canadian Commerce" is handed you while at the Exhibition, don't throw it away. It is worth looking through. It is a unique idea, which owes its origin to the Robert Simpson Co., Toronto—a pamphlet in the popular, artistic brown-paper effect, illustrated by seven pictures, drawn by the Toronto artist, C. W. Jefferys. "The Evolution of Canadian Commerce" is historical. Look it through.

Feed and litter carriers, a labor-saving device, are being generally installed in stables by progressive farmers. They are not only a great time and labor saver, but the litter carrier, being water-tight, is a great saver of liquid manure, which is deposited with the litter and solids in a heap in the yard or on a wagon or sleigh, to be drawn direct to the field in winter for top dressing. The firm of Beatty Bros., Fergus, Ont., manufacture these conveniences on the most up-to-date patterns. See their advertisement on another page in this paper.

QUESTIONS AND ANSWERS.

- 1st.—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.
- 2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.
- 3rd.—In Veterinary questions the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.
- 4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Veterinary.

INJURED DURING PARTURITION.

The morning after my mare foaled, her hind quarters swayed when she walked. She has got some better, but the trouble is still noticeable, and when turning she leans against the shaft. She also appears to toe out, while she formerly went straight. Would it do her any harm to work her?
D. G. McK.

Ans.—She sprained some of her muscles while foaling. Practically nothing can be done except allow nature its course. It is quite probable she will gradually improve, until a complete recovery results. It will be wiser not to work her at all, but especially not require her to draw heavy loads or work in soft ground. V.

UTERINE HERNIA.

The foal seemed to drop in my mare three days before she foaled. My veterinarian said there was uterine hernia. After she foaled he bandaged her, but we removed the bandage in eight days, as it was hurting her back. The foal is doing well now at three weeks of age, but the hernia is little better.
J. R.

Ans.—Your veterinarian did all that can be done, and it would have been better if you had consulted him before removing the bandage. It is not at all probable she will ever be much better than she is now. There is practically no treatment for these cases. The treatment adopted is the only treatment, and it seldom does good. She may continue to be a reasonably serviceable animal, but it will be better not to breed her again. V.

James J. Murray, who has more or less to do with river navigation in New Orleans, but is really an Englishman, said with a woe-begone smile: "I don't mind so much when they run sideways, but I would like to find the skipper who taught the horse to run backward that I backed!"

Harvest Time

should be a season of plentiful money for our farmers, and much of this should find its way into the Bank. We wish to remind all of the facilities of the

Bank of Toronto

for conducting the banking business of farmers. Surplus money should be deposited in our Savings Department, where it will earn interest, and where it will be

Safe

until required for use. Small or large amounts may be deposited or withdrawn at any time.

Assets, \$41,000,000

MARKETS

Toronto.

LIVE STOCK.

At West Toronto, on Monday, August 30th, receipts numbered 80 carloads, consisting of 1,701 cattle, 242 sheep, 28 calves. Quality of cattle good; no exporters selling; butchers' cattle firm; prime picked loads, \$5.50 to \$5.65; loads of good, \$5 to \$5.40; medium, \$4.50 to \$5; common, \$3.75 to \$4.50; cows, \$3 to \$4.20; calves, \$4 to \$7 per cwt.; milkers, \$40 to \$65; sheep, \$3.50 to \$3.90; lambs, \$5.50 to \$6.40 per cwt.; hogs, firm, at \$8, fed and watered at market, and \$7.75 f. o. b. cars at country points.

REVIEW OF LAST WEEK'S MARKET.

Last week, the receipts of live stock at the City and Union Stock-yards were large, the total being as follows:

	City.	Union.	Total.
Cattle	174	200	374
Cattle	2,803	8,735	6,538
Hogs	1,978	1,225	3,203
Sheep	3,182	602	3,784
Calves	589	107	696
Horses	4	102	106

As usual, the bulk of the best cattle were at the Union yards, where, on Tuesday, besides the butchers', there were 2,275 cattle bought for export purposes. Trade was brisk and prices firmer, as there were several loads of as good quality as has been seen on the market this season.

Prices for the choice cattle were higher than for several markets, two of the best loads selling at \$6.45 and \$6.50, while quite a large number sold over \$6 and up to \$6.25.

All of the leading American firms had buyers on the market, several of whom bought heavily.

Morris & Co., of Chicago, bought 923 steers and heifers; steers at \$5.25 to \$6, heifers at \$5.25 to \$5.50.

Swift & Co., of Chicago, bought 426 exporters; steers at \$5.75 to \$6.25; heifers at \$5.65 to \$5.80.

Armour & Co., Chicago, took 245 steers, averaging 1,260 lbs. each, at \$5.80; 55 steers and heifers, 1,107 lbs. each, at \$5.32. Amongst the steers bought by this firm were two loads at \$6.45 and \$6.50, the best on the market, which were fed by Walter Robson, of Plattsville, Ont., who has topped the market on two other occasions as well.

The S. & S. Co. bought 200 exporters, 1,253 lbs. each, at \$5.85; 23 heifers, 1,090 lbs. each, at \$5.70 per cwt.

Shamberg & Co. bought 120 exporters, at \$5.90 to \$6 per cwt.

Exporters.—Steers, good to choice, sold at \$5.90 to \$6.25, with three or four loads at \$6.30, \$6.45 and \$6.50; medium steers, \$5.40 to \$5.80; common steers, \$5 to \$5.30; heifers, \$5.60 to \$5.80; bulls, \$4 to \$5; and one of extra quality, weighing 2,310 lbs., was bought by the Swift Co., to go to London, England, at \$5.50 per cwt.

Butchers'.—Prime picked lots sold at \$5.30 to \$5.50; good, \$5 to \$5.25; medium, \$4.25 to \$4.75; common, \$3.50 to \$4; cows, \$2.50 to \$4.50, and a few up to \$4.80. A lot of inferior light cattle sold from \$2 to \$3, but the bulk of these were from Eastern Ontario, and were hard to cash at any price.

Stockers and Feeders.—There was little doing in either of these classes, and prices were unchanged, at following quotations: Steers, 1,000 to 1,100 lbs., \$3.75 to \$4.25; feeders, 900 to 1,000 lbs., \$3.50 to \$3.90; stockers, \$2.25 to \$3.

Milkers and Springers.—A fair supply of good milkers and springers met a stronger market, owing to several Eastern buyers being on the market. Good to choice cows sold at \$50 to \$60, with two or three reaching \$65; medium cows sold at \$35 to \$45, and common light ones, at \$25 to \$30.

Veal Calves.—Prices for veal calves were a little firmer, at \$3.50 to \$6.50, and \$7 per cwt. was paid for a few new-milk-fed calves.

Sheep and Lambs.—The market for sheep and lambs remained steady last week, at following prices: Ewes, \$3.50 to \$3.75; rams, \$2 to \$2.50 per cwt.; lambs, \$5 to \$5.75 per cwt.

Hogs.—Receipts of hogs continued light, and prices were firmer. Selects, fed and watered at the market, at \$8, and \$7.75, f. o. b. cars at country points.

BREADSTUFFS.

Wheat.—No. 2 white and red, 95c. to 96c., at outside points. Manitoba—No. 1 northern, \$1.22, No. 2 northern, \$1.20; No. 3 northern, \$1.19, f. o. b. cars at lake ports. Rye—70c. Barley—New, 54c. to 55c.; old, 56c. to 57c. Oats—No. 2 white, 47c. to 48c., track, Toronto; new oats, 38c., at points of shipment. Corn—No. 2 yellow, 79c. to 79½c., track, Toronto. Buckwheat—No. 2, 70c. to 75c. Flour—Ninety per cent. Ontario patents, old wheat, \$4.50, on track, Toronto; new-wheat flour for export, \$3.95, outside points. Manitoba first patents, \$5.80; second patents, \$5.30; strong bakers', \$5.10.

HAY AND MILLFEED.

Hay.—Baled, car lots, on track, Toronto, \$14.50 to \$15. Straw—Baled, in car lots, track, Toronto, \$9 to \$9.50. Bran—Car lots, track, Toronto, \$22. Shorts—Car lots, track, Toronto, \$24.

COUNTRY PRODUCE.

Butter.—Receipts large, with prices easy, at unchanged quotations. Creamery pound rolls, 23c. to 24c., with Locust Hill brand at 25c. to 26c.; creamery solids, 22c. to 23c.; separator dairy, 22c. to 23c.; store lots, 18c. to 19c.

Eggs.—Market firm, at 23c. for case lots.

Cheese.—Market firmer, owing to export demand. Large, 13c., and twins, 13½c.

Honey.—Receipts liberal; prices easy, at 10c. per lb. for finest extracted. Combs of choice quality, per dozen sections, \$2.50 to \$3.

Beans.—Market unchanged. Primes quoted at \$2.20 to \$2.25; hand-picked at \$2.35 to \$2.45.

Potatoes.—Farmers' loads sell at 70c. to 80c. per bushel.

Poultry.—Receipts moderate. Turkeys dressed, 16c. to 18c.; ducks, 14c. to 15c.; chickens, 16c. to 18c. per lb.; fowl, 11c. to 13c. Chickens alive, 14c. per lb., shipped in crates.

FRUITS AND VEGETABLES.

Receipts were very large last week. Prices ranged as follows: Apples, per basket, 20c. to 50c.; blueberries, \$1 to \$1.25; cantaloupes, 30c. to 70c.; cherries, nearly done, \$1; currants, black, \$1 to \$1.50; currants, red, 60c. to 90c.; gooseberries, 75c. to \$1; Lawton berries, 7c. to 8c. box; peaches, 30c. to 75c.; pears, 30c. to 60c.; plums, 35c. to 60c.; raspberries, box, 9c. to 10c. Beans, basket, 15c. to 20c.; cabbage, dozen, 30c. to 45c.; celery, basket, 30c. to 40c.; cucumbers, basket, 20c. to 25c.; green peppers, 25c. to 35c.; red peppers, basket, 75c. to 85c.; vegetable marrow, basket, 15c. to 25c.

HIDES AND WOOL.

E. T. Carter & Co., 85 Front Street East, Toronto, have been paying as follows: No. 1 inspected steers, 60 lbs. up, 13½c.; No. 2 inspected steers, 60 lbs. up, 12½c.; No. 1 inspected cows, 13c.; No. 2 inspected cows, 12c.; No. 3 inspected cows and bulls, 11c.; country hides, cured, 11½c. to 12c.; calf skins,

14c. to 16c.; horse hides, No. 1, \$3.00; horse hair, per lb., 30c. to 32c.; tallow, per lb., 5½c. to 6½c.; lamb skins, 50c. to 65c.; wool, unwashed, 12½c. to 14c.; wool, washed, 22c. to 24c.; wool, rejects, 16c. Raw furs, prices on application.

Montreal.

Live Stock.—Exports of live stock from the port of Montreal amounted to 3,204 cattle for the week ending August 21st, against 3,271 the previous week.

In the local market last week there was a very fair quantity of trade passing. Exporters did some purchasing, but the quality of the stock is rather inferior just now, and the offerings fairly large, so that the market is not advancing appreciably. Best cattle offered sold at 5c. to 5½c. per lb., good stock selling at 4½c. to 4¾c., medium at 3¾c. to 4c., common at 2¾c. to 3¼c., and inferior down to 2c. Lambs sold up to 6c. per lb., being rather scarce, while sheep sold at 3¾c. to 4c. per lb. Calves still held around the same figure, being \$2 to \$4 for poor, and \$5 to \$10 for best. The market for hogs showed a rather marked weakness, prices declining nearly ¼c. per lb., this being due to the fact that the offerings were spring hogs, being rather thin and costly to dress. Prices ranged from 8½c. to 8¾c. per lb.

Horses.—Heavy draft horses, weighing 1,500 to 1,700 lbs., \$225 to \$300 each; light draft, 1,400 to 1,500 lbs., \$180 to \$240 each; small animals, weighing from 1,000 to 1,100 lbs., \$100 to \$150 each; inferior and broken-down animals, \$75 to \$100 each; and choice saddle and carriage horses, \$300 to \$500 each.

Dressed Hogs and Provisions.—Notwithstanding the change in live hogs, dressed hogs continued steady, being still 12c. to 12½c. per lb., and demand good.

Potatoes.—The shipping trade is now waking up again, although the volume is still small. Carloads have been purchased at the rate of 60c. per 90 lbs., on track, Montreal, for delivery around first September, and these have been turned over at an advance of 10c. The price in bag lots, or small quantities, is about 80c., and sometimes 90c., per bag of 90 lbs.

Eggs.—Market continued very strong. The stock is still showing a heavy loss. It has been costing about 20c. to 21c., straight-gathered, in the country, and selling here at about 24c. for No. 1 candled, and 26c. to 27c. for selects, although some quotations ranged to 1c. less.

Honey.—Very little new stock is yet offering, but some new clover-comb seems to have been sold at 12½c. to 14c. per lb., and some extracted at 10c. to 11c., dark being quoted about 3c. less.

Butter.—Although there is still little export demand, little over 16,000 packages being shipped to date, as against over 63,000 a year ago, shipments are increasing, being over 5,000 week before last. Some very fine butter was available at 23c. to 23½c.

Cheese.—Shipments are now 936,000 boxes, since the first of the season, or 50,000 more than those of a year ago. Cost of Ontarios ranges up to about 12c., country points, but it is hard to get more than that figure here for the best Ontarios. Townships are about 11½c., and Quebecs 11c.

Grain.—Oats 44c. to 44½c. per bush., carloads, in store, for No. 2 Canadian Western; 43½c. to 44c. for No. 1 extra feed; 43c. to 43½c. for No. 1, and 43½c. for No. 3 Canadian Western. No. 2 barley sells at 66c. to 67c., and Manitoba feed barley, 64c. to 65c.

Flour.—The flour market holds on the easy side, with occasional declines. Manitoba spring wheat patents, first, \$5.90, second, \$5.40, and strong bakers', \$5.20. Ontario winter wheat patents, \$5, and straight rollers, \$5.75 per barrel.

Feed.—Manitoba bran, \$22 per ton, in bags, and shorts being \$24; Ontario bran, \$22 to \$23, and middlings, \$23.50 to \$24.50, pure grain mouille being \$33 to \$34, and mixed mouille being \$25 to \$27.

Hay.—Market steady, at \$14.50 to \$15 per ton, for No. 1 baled hay, carloads, Montreal, \$13 to \$13.50 for No. 2 extra, \$11.50 to \$12 for No. 2, \$10.50 to \$11 for clover mixed, and \$9.50 to \$10 for clover.

Hides.—Market in fine shape, quality good, supplies liberal and demand active. Dealers paid 11½c., 12½c. and 13½c. per

IMPERIAL BANK OF CANADA

CHARTERED 1875.

Capital Authorized, \$10,000,000
Capital Paid Up, - 5,000,000
Reserve, - - 5,000,000

SAVINGS DEPARTMENT.

\$1.00 opens an account. Interest paid at highest current rate from date of deposit.

Farmers' sale notes discounted. Branches throughout the Dominion of Canada.

lb. for Nos. 3, 2 and 1 hides, respectively, for country take-off, city hides being ¼c. per lb. more all round; country calves, 14c. for No. 2 and 16c. for No. 1, and city 1c. more, and selling to tanners at ¼c. to 1c. advance all round. Lamb skins are 35c. to 40c. each; horse hides, \$1.75 each for No. 2, and \$2.25 for No. 1. Rough tallow, 1¼c. to 3c.

Cheese Markets.

Campbellford, Ont., 925 boxes, all sold at 11½c. Stirling, Ont., 11½c. offered, no sales. Madoc, Ont., 11½c. bid. Brockville, Ont., sales 11½c. and 11c. Belleville, Ont., 11½c. and 11 7-16c. Kingston, Ont., 11 5-16c. Winchester, Ont., 11 7-16c. At Napamoo, Ont., all sold at 11 7-16c. Perth, Ont., 11½c. bid; no sales. Picton, Ont., 11½c. and 11 7-16c. Listowel, Ont., 11 1-16c.; no sales. Cornwall, Ont., 11 7-16c. bid. Huntingdon, Que., 11 5-16c. Iroquois, Ont., 11 7-16c. Ottawa, Ont., 11 7-16c. St. Hyacinthe, Que., 11c. London, Ont., no sales, 11c. and 11½c. bid.

Chicago.

Cattle.—Steers, \$5.60 to \$7.85; cows, \$3.50 to \$5.25; heifers, \$3.50 to \$6; bulls, \$3 to \$4.85; calves, \$3 to \$9; stockers and feeders, \$3.75 to \$5.15.

Hogs.—Choice heavy, \$8 to \$8.15; butchers', \$7.90 to \$8.10; light mixed, \$7.70 to \$7.90; choice light, \$7.90 to \$8.05; packing, \$7.60 to \$7.75; pigs, \$6 to \$7.90; bulk of sales, \$7.60 to \$8.

Sheep and Lambs.—Sheep, \$4 to \$5, lambs, \$6.75 to \$7.90; yearlings, \$5 to \$5.50.

Buffalo.

Cattle.—Prime steers, \$6.50 to \$6.85. Veals.—\$6 to \$9.75; few, \$10. Hogs.—Heavy, \$8.40 to \$8.50; mixed, \$8.30 to \$8.40; Yorkers, \$7.85 to \$8.80; pigs, \$7.75 to \$7.90; roughs, \$6.85 to \$7.15; stags, \$6 to \$6.25; dairies and grassers, \$7.75 to \$8.20. Sheep and Lambs.—Lambs, \$5 to \$8; yearlings, \$5.25 to \$5.50; lambs closing 25c. lower.

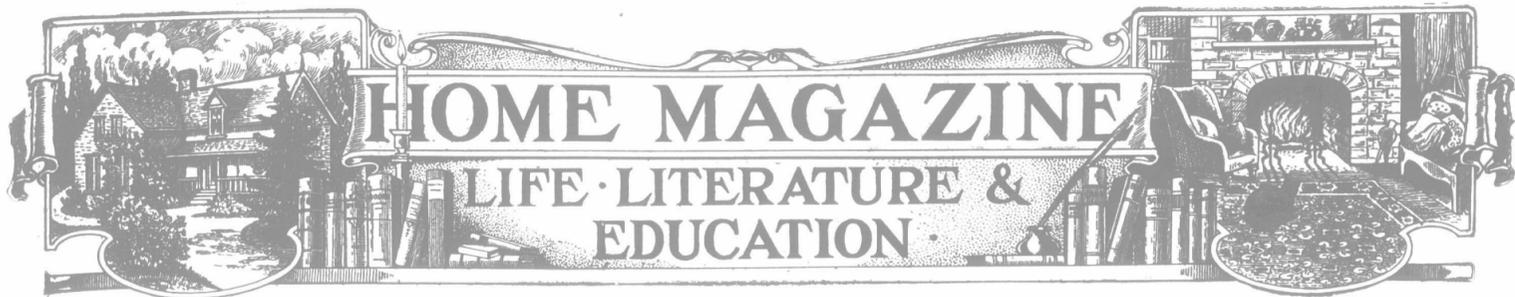
British Cattle Markets.

London cables 11½c. to 13½c. per lb. for Canadian steers, dressed weight; refrigerator beef, 10½c. to 10¾c. per lb.

GOSSIP.

HAULING MANURE.

The latest experiments made by the Ohio Station prove that when manure was thrown into the open barnyard and permitted to lie there for five months, before being hauled to the field, it had a value of \$2.40 per ton. When drawn directly to the field as fast as it was made, the value was \$3.25 per ton. When the manure was sprinkled with ground phosphate rock as fast as it was made in the stable, thus preventing some loss of ammonia, the value was \$5.18 per ton. The claim is made that at least one-third of the value of the manure is lost, as it is usually put on the land with a fork, and that ten loads put on with a manure spreader, go as far, and do as much good as fifteen loads put on in the old-fashioned, careless way.



The scheme of naval defence for Canada, formulated at the Imperial Defence Conference, is, upon the whole, meeting with the endorsement of the Canadian press. By it, the formation of the nucleus of a Canadian navy will be begun in the early future, on both Atlantic and Pacific coasts. Cruisers, not Dreadnoughts, will be constructed, and the movements of the vessels will be under absolute control of the Federal Government, although ready at all times to give assistance to Britain in time of emergency. The scheme also provides for the increase of dock facilities, and looks to a distribution of naval forces at some future time, including Halifax, Esquimalt, Prince Rupert, Quebec, and Montreal.

A further outcome of the conference was the provision for a great, homogeneous Imperial British Army, with oversea military-training colleges, to be established in the colonies, and a constant interchange of officers from all parts of the Empire, to secure uniformity of organization and training. In accordance with this plan, Sir John French will come to Canada to work out its details in the Dominion.

This all looks as though Canada were committed, with the rest of the world, to militarism; and yet there are prophets among the most eminent military men and statesmen who believe that the world is entering upon the greatest era of peace that it has known. M. Bleriot's flight across the Channel in his airship, in the short space of half an hour, may, it is held, have opened a possibility which may revolutionize the whole art of war, and force the nations into agreements such as have never before been deemed practicable or advisable.

The turmoil created by the introduction of Mr. Lloyd-George's Budget, last spring, has but received fuel from the Premier's speech at Limehouse last month. "Dismay among the Unionists," say some of the reports, and if the adage be true that "a house divided against itself cannot stand," the dismay is not unwarranted. A few of the Unionist journals, indeed, confess outright that the land-tax proposals are popular, and that it would be dangerous to oppose them; others continue to reiterate the old cry that the "excessive burden" laid upon the rich will eventually discourage private enterprise, diminish employment, reduce wages, and drive industry from the country—an apprehension which Mr. Lloyd-George simply meets with the somewhat unanswerable question, "Where will it go?"

The Times, in commenting upon the Limehouse address, declares the Premier's speech to have been void of facts, and filled with misrepresentation and "highly-colored invective." It hints that he spoke to an "ignorant audience," incapable of understanding the true position of the great land-owners, or the cost at which their estates were procured, and it accuses him of trying to "manufacture political capital, by stirring up class enmity." At the same time, it tacitly admits that the current is running with the Government, by insinuating that, "his position may influence the multitude, in spite of the personal idiosyncrasies of him who holds it." "The effect, and, we fear, the aim of his inflammatory language," continues the editorial, "is to represent those who

have land as owners of something for which they paid nothing, and his arguments for taking a portion of their capital are equally good for taking the whole."

It is obvious that so lame an argument will not convince the thinking people of England—and these are found in every class—that Mr. Lloyd-George is a mere filibuster, bent on wholesale depredations. From the beginning—that day upon which the Premier launched his famous proposals, almost collapsing afterwards from the tenseness of the realization of the storm which he had precipitated—it has been clear that the Budget's chief aim is merely to take the larger part of the increased revenue required for public measures from those most able to pay it, and it has been equally clear that, while luxuries must be taxed, the prime necessities of life must not be tampered with. It will be hard to convince those who have a sense of justice, a sense which may be more widespread than is at first evident, that such a policy is other than eminently humane, and calculated to develop a greater sense of independence and contentment among the great mass of the population in England, without impairing in the slightest the real comfort of the rich. Nor will it be any easier to convince those who are even ordinarily clear of vision that the labor created and paid for by the State will be any the less acceptable to the laboring classes than that provided by the very uncertain "private enterprise," nor that, even though private charity be entailed, the policy of rendering the poor independent of charity, will not work out better in the end.

Upon the whole, the arguments against the Budget appear more ridiculously weak the longer the light of critical examination falls upon them. On the other hand, as time goes on, it becomes more and more evident that Mr. Lloyd-George's name will go down to posterity as that of one of the greatest, because one of the most far-seeing and fair-minded statesmen of modern times.

People, Books and Doings.

Tokio contains 900 public bathing-houses, an institution that dates from time immemorial in Japan.

Miss Julia Marlowe, the famous

actress, is to play "Hamlet" next season, to E. H. Sothern's "King." Among other women who have taken this masculine part were the great Sarah Siddons and Sara Bernhardt.

The proposal to erect a shrine to Joan of Arc at Westminster Cathedral, has received the blessing of the Pope. This was a necessary preliminary, as shrines cannot be erected without permission to persons who have not been "canonized," and Joan of Arc has only been "beatified." A penny collection from the Roman Catholic women and girls of England is to be made for the erection of the shrine, and this is being organized by the Catholic Women's League.

Women policemen were enrolled at Bayonne, N. J., this summer, their duty being to maintain order among the children and look out for the comfort of elderly people in the park. They are known as "guardian mothers."

A new book of poems, "The Ballads of a Cheechako," by the Yukon bank clerk, Robert W. Service, will receive a warm welcome from the thousands who have found his first volume, "The Songs of a Sourdough," worthy of an honored place among the "best" books of their libraries. Service's poems go "right to the spot" somehow. They are eminently strong, full of life and vim, and the very atmosphere of the great strange land of the North. They make one laugh, they make one cry, and at times they make one feel the necessity of gripping life and making it as well worth living as it should be. We have many poets who write daintily. We have one who is from the start the man, as well as the artist of the fine brush and the song that touches the heart, and his name is Robert W. Service.

Almost everyone has heard of remarkable coincidences, inventions perfected simultaneously by two men who never heard of each other, books written with similar plots, etc., ad infinitum. Among the most remarkable of these was the promulgation of the origin of species theory, at identically the same time, by Charles Darwin and A. R. Wallace. Darwin, however, had been working on the theory for twenty years. To Wallace, it had come almost as an inspiration.

It appears that, in 1856, Darwin

decided to submit his theory to Sir Charles Lyell, and, on the advice of the latter, began writing it out. By June, 1858, he had finished ten chapters; then a manuscript reached him from Mr. Wallace, who was then in the Malay peninsula. Darwin's astonishment may be imagined, when he read in it precisely his own theory in epitome; also, his embarrassment, for he was now placed in a position which made his honor in publishing his own manuscript questionable. Finally, Sir Charles Lyell and Dr. Hooker took the matter in hand, by deciding that it would be fair to publish simultaneously with the essay of Mr. Wallace, a letter to Dr. Asa Grey, written in September, 1857, in which Darwin had written an account of his theory. The two papers were read to the Linnean Society on the evening of July 1st, 1858, and Mr. Wallace was informed of the steps that were being taken. Out of the incident grew one of the most remarkable friendships on record, and the two scientists became like brothers. In March, of 1859, the "Origin of Species" neared completion. "I can see daylight through my work," wrote Darwin, "and am now finally correcting my chapters for the press. I am weary of my work. It is a very odd thing that I have no sensation that I overwork my brain; but facts compel me to conclude that my brain was never formed for much thinking." On November 24th, 1859, the book was published, and the whole edition of 1,250 copies was sold out on the same day. It precipitated a storm, which came to a climax in the Museum Library, where Bishop Wilberforce and Huxley, the latter championing Darwin, fought a wordy battle, in a room crammed to suffocation. Little wonder that the atmosphere became so electric that women were carried out fainting; the most astounding theory of modern times was there bursting from its chrysalis.

O, common are sunshine and flowers,
And common are raindrop and dew,
And the gay little footsteps of children,
And common the love that holds true.
So, Lord, for our commonplace mercies,
That straight from Thy hand are bestowed,
We are fain to uplift our thanksgivings—
Take, Lord, the long debt we have owed!

—Margaret E. Sangster.



Evening at the Harbor, Goderich.

Hope's Quiet Hour.

Noted in Thy Book.

Are not these things noted in Thy Book?—Ps. 56: 8.—(P. B. version.)

When God wishes to make it very clear that nothing ever escapes His notice, and nothing can be forgotten by Him, He uses a very striking figure, and declares that a "book of remembrance" stands always open before His face. Nothing that happens to one of His children is too unimportant to be recorded in His remembrance, no word or act or thought of ours fails to attract His closest attention. Of some it is declared that their names "shall not be blotted out of the book of life"—does that imply that other names, once recorded there, shall be blotted out?—Rev. iii., 5. The gates of the City of God stand wide open, so that the nations in the East and North and South and West can enter freely—and yet no one is admitted unless his name is written in the book of life—Rev. xxi., 27.

But this "book of life" is called "another book," and we read of other books which shall be opened one day, and the dead shall be "judged out of those things which were written in the books, according to their works."—Rev. xx., 12.

Life may sometimes seem to us uninteresting and unimportant; but, when we remember the awful books of God in which every moment's record is noted down—with our consent or without it—we are awakened to a sense of its serious importance.

It is impossible to tamper with these records, they stand as imperishable as if they were graven, as Job says, "with an iron pen and lead in the rock for ever!" Unless—what a glorious hope!—Christ should Himself blot out the handwriting "that was against us, which was contrary to us . . . nailing it to His Cross." Col. ii., 14.

In the 56th Psalm, from which our text is taken, we see how a servant of God may be pursued by enemies who "every day wrest his words," and lie in wait to injure him. Such a position might be very alarming—but is it? All these things are noted in God's book. No tear of the oppressed but is a mighty prayer to Him, no weapon that is formed against a servant of the Most High, but will pierce the hand that holds it—"Curses, like chickens, go home to roost," says the proverb. Pilate boasted that he had power to crucify the Holy One, and he was quietly informed that he had no power at all against Him, except as

God permitted him to act. It is the same to-day. Have you enemies who are apparently strong enough to injure you? All their plots are written in God's book, and He will overturn them if you are walking straight forward with your eyes on His face.

Or is it the other way round? Are you laying your plans carefully, hoping to get some unfair advantage over anyone, trying to cheat in a large or a small way, fancying that you are safe from detection? Are not all your plans naked and open before the eye of God—written in His book? When he sees fit, your carefully-laid plots can be destroyed in a moment, bringing shame and ruin on yourself: "For there is nothing covered, that shall not be revealed; neither hid, that shall not be known. Therefore, whatsoever ye have spoken in darkness shall be heard in the light; and that which ye have spoken in the ear in closets shall be proclaimed upon the house-tops."

As Ella Wheeler Wilcox says:

"In the long run all hidden things are known,
The eye of truth will penetrate the night,
And good or ill, thy secret shall be known,
However well 'tis guarded from the light.
All the unspoken motives of the breast
Are fathomed by the years and stand confest
In the long run."

Carlyle declares that the people who fancy there is no justice in the world are making a tremendous mistake, for "there is nothing else but justice!" He says to one who is attempting to do an unjust thing: "Success will never more attend thee: how can it now? Thou hast the whole Universe against thee. No more success: mere sham—success, for a day and days . . . thou beautifully rollest: but know'st thou whitherward? It is toward the road's end . . . till Nature's patience with thee is done, and there is no road or footing any farther, and the abyss yawns sheer!" And he says again: "One strong thing I find here below: the just thing, the true thing. My friend, if thou hadst all the artillery of Woolwich trundling at thy back in support of an unjust thing; and infinite bonfires visibly waiting ahead of thee, to blaze centuries long for thy victory on behalf of it,—I would advise thee to call halt, to fling down thy baton, and say, 'In God's name, No!' Thy 'success?' Poor devil, what will thy

success amount to? If the thing is unjust, thou hast not succeeded; no, not though bonfires blazed from North to South, and bells rang, and editors wrote leading-articles, and the just thing lay trampled out of sight, to all mortal eyes an abolished and annihilated thing. Success? . . . what kind of success is that!"

Pilate seemed to succeed in doing an awful injustice, and yet even a man who does not believe—or says he does not believe—in a life after death, would hardly care for such miserable success as his.

But I do not like to dwell on the dark side, nor seek to drive men by the fear of sin's certain consequences. My name is still "Hope," and in God's books many things are written down in shining letters of golden glory. There are many pages that He loves to read over and over again.

There are unselfish prayers there—prayers which never fail to win His tender, wise attention. Prayers of parents for children and of children for parents, prayers for those who are kind and—better still—prayers for those who are unkind and unjust. There are countless acts of cheery, kindly service—perhaps the brightest glow rests on the records of loving kindness rendered by those whose hearts and bodies are weary and sore. God has not forgotten the least cup of cold water, and—though it may seem to be unnoticed—He is pledged to see that it shall not go unrewarded. No one is wasting his time who is sowing seeds of kindness. The harvest is both valuable and certain.

"In the long run all love is paid by love,
Though undervalued by the hosts of earth;
The great eternal Government above,
Keeps strict account and will redeem its worth.
Give thy love freely; do not count the cost:
So beautiful a thing was never lost
In the long run."

You belong to One Who says that, though a mother may forget her child, yet He will never forget. Your name is not only written in His book, it is written—engraved—upon the palms of His hands—Isa. 49: 16. Yes, it is written in a still more sacred place, for as Aaron bore the names of the children of Israel "upon his heart," when he entered within the Vail into the most holy place, so our Great High Priest "ever liveth to make intercession" for us. As He prayed for one weak disciple whom Satan desired

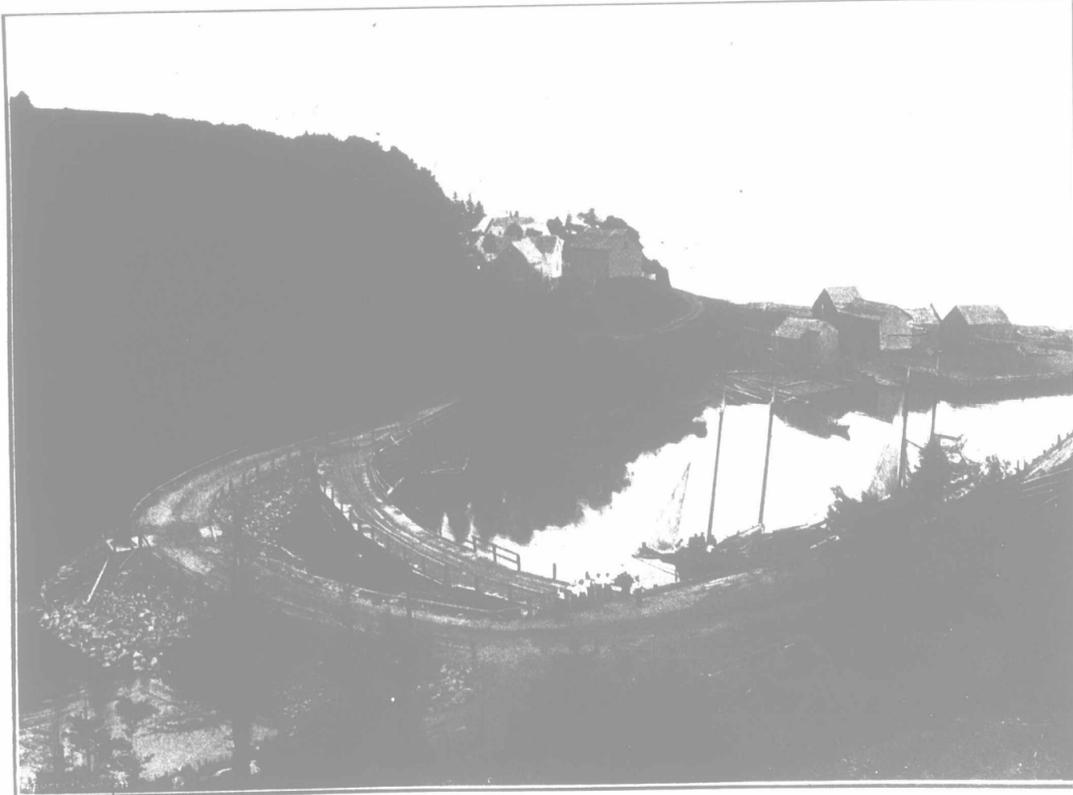
to sift as wheat, so He prays for you and for me. By the might of Christ's watchful love, Satan's siftings can only separate the chaff from the wheat in our souls—if we keep near to our rightful King—and we can grow stronger, because of temptation conquered, and even win sweet graces of humility and penitence from the sorrow of failure. God notes in His book not only our frequent falls, but also our battles, which only He can understand. To Christ has been given the right to be our Judge, "because He is the Son of man"—He knows what the fight against temptation is like. His own desperate struggle in Gethsemane, His effort to say, "Thy will be done!" when facing Calvary, is also noted in the book of remembrance. Surely He knows how often we fight back the desire to say, "My will—not Thine—be done!" and how self-will, which we thought was conquered, comes back again and again, trying to take command of our lives.

Our prayers are noted in God's book. He cannot free us from all pain and difficulty and temptation—that would be a cruel answer to our prayers, for we should then have no chance to grow brave and patient and trustful. But He always answers our prayers for growth in holiness—if they are real prayers—perhaps by leading us after our Master up the steep hill where the cross is waiting for our endurance. He makes no mistakes, and forgets nothing that we need. Can we not trust Him until the light comes? To trust in the darkness is beautiful and brave. Thank God if He is asking you to do that.

"I sometimes think God's heart must ache,
Listening to all the sad, complaining cries
That from our weak, impatient souls arise,
Because we do not see that for our sake
He answers not, or answers otherwise
Than seems the best to our tear-blinded eyes.
This is love's hardest task, to do hard things
For love's own sake, then bear the murmurings
Of ignorance, too dull to judge aright
The love that rises to this wondrous height
He knows we have not yet attained;
and so
He wearies not, but bears complaint and moan,
And shields each wilting heart against
His own,
Knowing that some glad day we too
shall know."

And then we shall probably thank Him most of all for what we now imagine to be "unanswered prayers"—as if any real prayer of a true and loyal heart could ever be unanswered!

DORA FARNCOMB.



A Bit of Nova Scotia Scenery.
Hall's Harbor on south shore, Bay of Fundy.

Dear Friends of "The Farmer's Advocate,"—Again the work of the "Toronto Children's Fresh-air Mission" is over. It has been our privilege to send out many more little ones this year—the number being over 700—sometimes sending 40 or more to one station, who were met and cared for by different friends in that neighborhood.

Through God's goodness no harm or accident has befallen them, for He Who notes the sparrow's fall is ever mindful of these little ones.

To the friends who (after reading "The Door of Opportunity" in "The Farmer's Advocate") sent for the boys and girls, and gave them such a glorious holiday—one which they will never forget—we wish to express our appreciation and grateful thanks, not the thanks of the workers alone, but of the parents of the children, who—when meeting them on their return from the country—often failed to recognize their own children, on account of the new hats, new dresses, boots, etc., which had been given them.

Seven homes were missed this year, through the children failing to be down at the station on time; we regret this very much, for we realize that sometimes it means a long drive to meet these children, and a half a day is lost.

The medical examination has been a great help to the work, doctors kindly volunteering their services. Every child

sent out was examined and found free from disease.

We also wish to thank the contributors, those who sent their gifts without a name, telling us of seeing the account of the work in "The Farmer's Advocate."

We do not publish a name in connection with the contributions, and would like the friends to sign their names, because, in sending out our reports next year, they would be remembered.

Yours very sincerely,
FLORENCE ROBERTS.

Secretary "Toronto Children's Fresh-air Mission."

With the Flowers.

Flowering Bulbs for Christmas Presents.

No more dainty Christmas gift can be presented than a thrifty green plant, in flower, or even in bud, with the rich promise of flower. Azaleas and poinsettias are much used for this purpose, and beautiful they are, but they are somewhat difficult of successful cultivation, unless one has greenhouse facilities, and are by no means as sure or as satisfactory as are a number of flowering bulbs.

The bulbs used for winter blooming are divided into two classes: (1) The Dutch bulbs—lilies, hyacinths, tulips, narcissus, crocus and squills; (2) the Cape bulbs (so-called because they were originally brought from the Cape of Good Hope)—freesias, ixias, oxalis, gladioli.

Of these the kinds which can be forced for bloom at Christmas are the freesias, oxalis, hyacinths, Roman hyacinths, paper-white narcissus, polyanthus narcissus, and common daffodil—which is also a species of narcissus.

To have success with bulbs it is necessary: (1) To have plenty of drainage material, such as broken crockery, in the bottom of the pots; (2) to give plenty of time for a strong root growth before forcing; (3) to have the right kind of soil, rich, yet light and porous. The kind that bakes or gets hard is the worst; the soil scraped from about the roots of grass in old sod, enriched by a little leaf mould and a little of the black earth from the edge of a barnyard, is about the best. Not a vestige of strong manure must be used.

Failure in giving sufficient time for root growth is sure to bring nothing but disappointment, and to avoid it it must be remembered that nearly all of the bulbs require, except under exciting conditions, at least six weeks, but ten are better, to develop roots before being forced, the method being somewhat different, however, for Dutch and Cape bulbs.

Dutch bulbs must be stored in a cool, dark place after potting—a dark corner of a cool cellar is good, although some bury the bulbs out of doors and move them into the cellar when the ground threatens to become too stilly frozen to move them later with convenience. The soil is dampened when the bulbs are put away, and but little water is needed afterwards, unless the soil should threaten to become bone-dry, when a little may be given. The bulbs are left thus for from 6 to 10 weeks, or until there is a good root growth, and a sprout about 1 1/2 inches in length appears. Then they are brought into a cool room and kept in a subdued light until the blanched-looking sprout turns a healthy green, when they are taken to a warmer atmosphere—about 60 degrees, although some greenhouse men make it 70—and given plenty of light. They should not, however, be submitted to strong hot sunlight. After coming out of the cellar bulbs should be given plenty of water and syringed twice a day. At night the temperature should be uniformly about 55 degrees.

The treatment for Cape-bulbs is in all respects similar to this, except that they must not be set away in the dark after potting. Instead, they should be kept for some days to ten weeks in a cool, light place, such as a cold-frame or unheated house, before being forced.

A box of the bulbs, however, do not need to be a probation. Among these are the crocus and oxalis, which may be grown steadily, if preferred, from the time of sowing, although they are the

better of two or three weeks rooting; the Chinese sacred lily, which may be grown in water; the paper-white narcissus, and the common daffodil.

SOME BULBS IN DETAIL.

Freesias have very pretty little flowers, white or pale yellow in color, and usually fragrant. They are fine for cut-flowers, as, if the stems are placed in water when two flowers have opened, the rest will come out as do the gladioli. Put a dozen bulbs in a six-inch pot, set in a cool, light place for two or three weeks—or if you want them in flower for Christmas, keep growing steadily from about the last week in August. This hint is too late for this year, but will do again. Guard against over-watering until the flowers show, and when the flowering season is over ripen off in pots and keep dry during summer. This is one of the few bulbs that can be depended upon to bloom a second year.

Hyacinths, especially the Roman variety, are very satisfactory for forcing. The single kinds should always be chosen. Give treatment described above for Dutch bulbs, planting one large hyacinth, or three or four Roman hyacinths, in a pot. The latter should be in flower in four weeks. If any of the hyacinths produce flower buds too soon—that is, shortly after the top starts—the flower will likely "choke" or stay down among the leaves, amounting to nothing. To avoid this, make a cone of thick brown paper the size of the pot, cut about 1 1/2 inches from the apex, and put over the plant. The stalk, if the flowers have not developed beyond the bud stage, will grow upwards towards the light, and may give you a fair show of bloom.

The paper-white narcissus and the common daffodil are both great favorites for Christmas forcing, the more especially as they require less time before blooming than many other varieties. Plant three bulbs in a five-inch pot, setting the bulbs with the neck at the surface; set in the dark for five or six weeks, and allow three or four weeks afterwards for forcing. If the pots are brought up at intervals of two weeks, a succession of these flowers may be ensured for all winter.

Crocuses, the Christmas rose, and even snowdrops, all make delightful pot plants. Allow the crocus two weeks for forcing, the Christmas rose from two to three weeks, and the snowdrop about three weeks.

Just a word in closing. The time for rooting, as given above, is that required when conditions are right. It may be, however, that some exciting cause—such as too much heat or light—will cause a premature top growth, or will hurry the roots on so that the pots are filled with them in about a month. For this reason it is well to look at the plants from time to time, turning the soil out in a ball, by rapping the edge on some hard surface, then inverting. If only a few white rootlets are visible, leave the pots in the dark a while longer, but if a thick network appears around the edge of the soil, bring up at once, even if only four weeks have elapsed. If the top growth shows signs of coming too soon, put in a cooler place if possible, and if it insists on growing on, as may occasionally happen, you may as well bring the plant up at once, as it will be of no use at all if left in the dark too long after the top growth has started. You cannot hope for much success, however, from such behavior. Slow, steady root growth, followed by slow, steady top growth, is the surest passport to a fine showing of bloom.

When potting the bulbs examine each one, and if there is a thick scale or crust on the base, pull or cut it off gently; otherwise much of the strength of the bulb will be exhausted by the efforts of the roots to push through.

Bulbs for Outdoor Planting.

Order bulbs for outdoor planting early. No other investment in the plant line can give you so much pleasure as these are sure to do, coming in bloom, as they will, almost before any of the other flowers in the garden next spring.

The most satisfactory bulbs for autumn planting are the snowdrops, crocuses, scillas, hyacinths, grape hyacinths, narcissi, tulips, trilliums, and some of the



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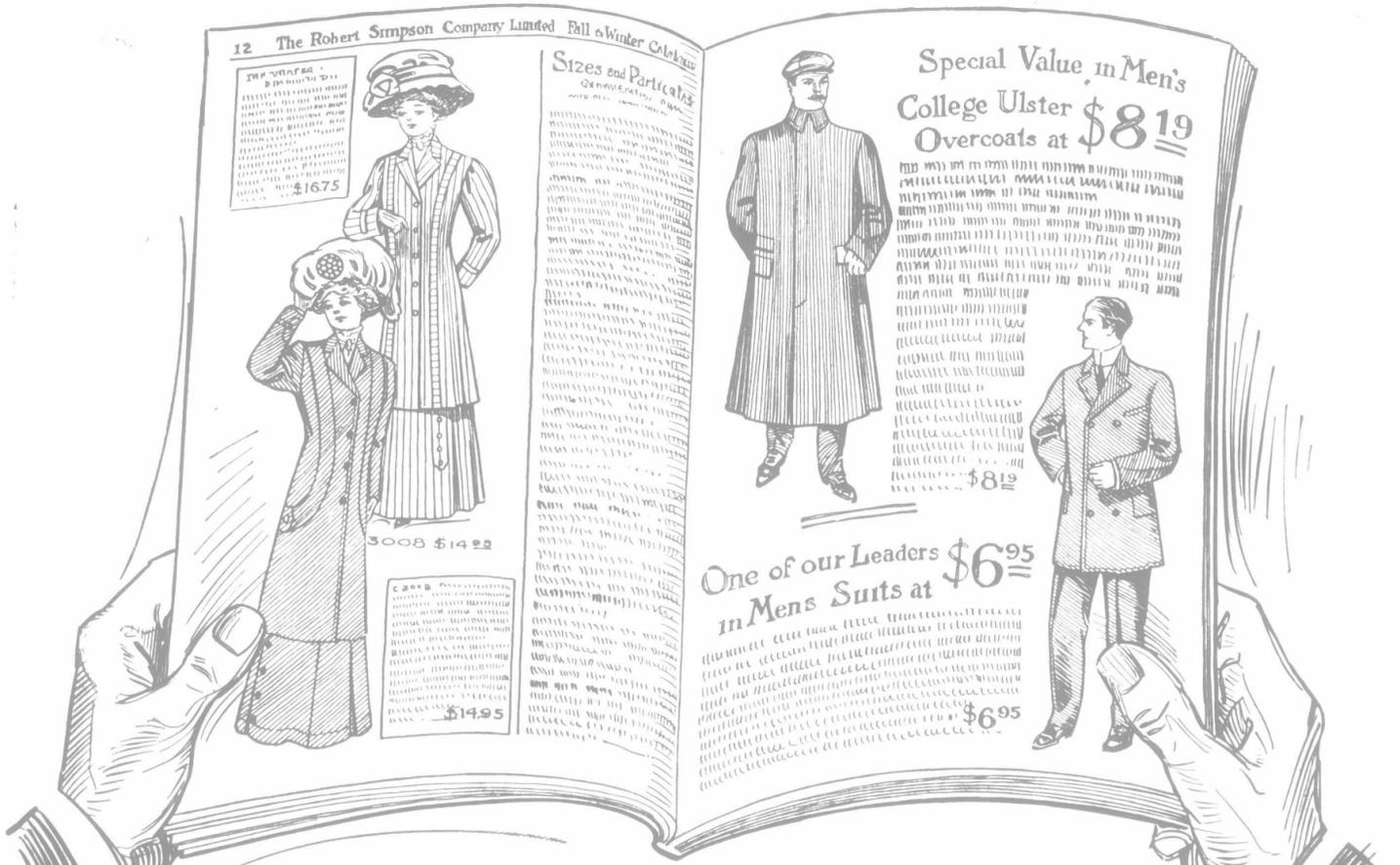
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lilies. Plant lilies with the tops 5 inches below the surface; narcissus, 4 inches; hyacinths, 4 inches; tulips, 4 inches; jonquils, 3 inches; scillas, 3 inches; snowdrops and crocuses, 2 inches. Plant from four to six weeks before freezing nights are expected, in beds of rich loose loam, and cover with straw or litter on the approach of severe weather. If the soil of the garden is stiff and hard, enrich the bulb-bed by the addition of black leaf-mould, or well-rotted compost, but never use strong manure. A little sharp sand may be mixed in to give friability.

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[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.]

Schools and Mothers.

Some Normalites in this city were sent out visiting, just before holidays, among the country schools of the vicinity, and it was truly interesting to hear their comments on returning. For they were alert and enthusiastic, these young people, and being on trips of observation, their eyes were all-seeing. This school was "dandy," that one "all right," and yet this one came in for all sorts of condemnation: the plaster was broken, the floor and walls dirty, the few pictures askew, and no flowers anywhere. When they had schools of their own they weren't going to have them like that.

It is to be hoped that these embryo teachers will not forget such good resolutions. It seems to me now, that in the old days when I taught school I did not realize the importance that lies in such things. When one is young, one is sometimes thoughtless, and in those days it was taken for granted that the country schools should be all alike, cheerless. To-day it seems equally clear that the schoolhouse should be more and more a home for the children, seeing that they must spend so considerable a portion of their young lives in it.



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Beautiful surroundings, plus a teacher of refinement and honor, must surely be a check on roughness and destructiveness,—and what parent is there who does not want to have gentle, pretty-mannered children?

There is much that the teacher and mothers can do towards making the school-room attractive, and at very little expense, if they only set about it. It does not cost very much to have flowers on the window sills inside and window-boxes on the outside; nor to alabastine the walls a pretty buff or sage-green, and passe-partout a few good Perry prints, which may be bought at such small outlay from the Perry Picture Co., Boston. A concert once in a while would do it. . . . Nor does it seem greatly out of the way to think that a school-room might be cleaned somewhat more frequently than is the average rural school-room. There is nothing very elevating about a grimy living-room, and, besides, think of the germs that dust harbors. Wherever dust lies or flies these germs—bacteria—are present, and at any time the weak or temporarily weakened child may be affected by them.

I think there should be more sympathy and more co-operation between the teacher and the mothers of the section than usually exists. Often, I am sure, the mothers do not realize the hard place the teacher is filling. She has to please a great many people, who have different ideas as to what she should do; she has many different dispositions to deal with among the children, and if she is conscientious she is bitterly conscious of her own mistakes—for she is sure to make mistakes sometimes,—she would be an angel if she did not. If mothers and teacher would try to work hand in hand, as friends bound together by a common interest, to make the right sort of men and women out of the little wriggling bits of "concrete material" that occupy the school seats, there would probably be better results and fewer misunderstandings. But too often there is a gap, simply for want of better acquaintance. Might not co-operation in beautifying the school-room and its surroundings open a way to that better acquaintance? And might not such an acquaintance pave the way to the more important things? I do not think it improbable that it might.

I have heard it said that women can never co-operate in anything. That some "one" is always sure to want to "boss the job," and that the rest are likely to go off in a huff. But surely woman can have more common sense than that; and, besides, there is always the safe plan of letting the vote of the majority rule. Now, I leave the suggestion with you.

DAME DURDEN.

The Golden Dog

(Le Chien D'Or.)

A Canadian Historical Romance.

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CHAPTER XXXIII.—Continued.

Down past the green hills of the south shore the boatmen steadily plied their paddles, and kept singing their wild Indian chant. The wooded slopes of Orleans basked in sunshine as they overlooked the broad channel through which the canoe sped, and long before meridian the little bark was turned in to shore and pulled up on the beach of St. Valier.

Fanchon leaped out without assistance, wetting a foot in so doing, which somewhat discomposed the good humor she had shown during the voyage. Her Indian boatmen offered her no help, considering that women were made to serve men and help themselves, and not to be waited upon by them.

"Not that I wanted to touch one of their savage hands," muttered Fanchon, "but they might have offered me assistance." "Look there," continued she, pulling aside her skirt and showing a very trim foot wet up to the ankle; "they ought to know the difference between

their red squaws and the white girls of the city. If they are not worth politeness, we are. But Indians are only fit to kill Christians or be killed by them; and you might as well courtesy to a bear in the briars as to an Indian anywhere."

The boatmen looked at her foot with supreme indifference, and taking out their pipes, seated themselves on the edge of their canoe, and began to smoke.

"You may return to the city," said she, addressing them sharply; "I pray to the bon Dieu to strike you white; it is vain to look for manners from an Indian! I shall remain in St. Valier, and not return with you."

"Marry me, be my squaw, Ania?" replied one of the boatmen, with a grim smile; "the bon Dieu will strike out papooses white, and teach them manners like palefaces."

"Ugh! not for all the King's money. What! marry a red Indian, and carry his pack, like Fifine Perotte! I would die first! You are bold, indeed, Paul La Crosse, to mention such a thing to me. Go back to the city! I would not trust myself again in your canoe. It required courage to do so at all, but Mademoiselle selected you for my boatmen, not I. I wonder she did so, when the brothers Ballou, and the prettiest fellows in town, were idle on the Batture."

"Ania is niece to the old medicine-woman in the stone wigwam at St. Valier; going to see her, eh?" asked the other boatman, with a slight display of curiosity.

"Yes, I am going to visit my aunt Dodier; why should I not? She has crocks of gold buried in the house, I can tell you that, Pierre Ceinture!"

"Going to get some from La Corriveau, eh? crocks of gold, eh?" said Paul La Crosse.

"La Corriveau has medicines, too! get some, eh?" asked Pierre Ceinture.

"I am going neither for gold nor medicines, but to see my aunt, if it concerns you to know, Pierre Ceinture! which it does not!"

"Mademoiselle des Meloises pay her to go, eh? not going back ever, eh?" asked the other Indian.

"Mind your own affairs, Paul La Crosse, and I will mind mine! Mademoiselle des Meloises paid you to bring me to St. Valier, not to ask me impertinences. That is enough for you! Here is your fare; now you can return to the Sault au Matelot, and drink yourselves blind with the money!"

"Very good, that!" replied the Indian. "I like to drink myself blind, will do it to-night! Like to see me, eh? Better than go to see La Corriveau! The habitans say she talks with the Devil, and makes the sickness settle like a fog upon the wigwams of the red men. They say she can make palefaces die by looking at them! But Indians are too hard to kill with a look! Fire-water and gun and tomahawk, and fever in the wigwams, only make the Indians die."

"Good that something can make you die, for your ill manners! look at my stocking!" replied Fanchon, with warmth. "If I tell La Corriveau what you say of her, there will be trouble in your wigwam, Pierre Ceinture!"

"Do not do that, Ania!" replied the Indian, crossing himself earnestly; "do not tell La Corriveau, or she will make an image of wax and call it Pierre Ceinture, and she will melt it away before a slow fire, and as it melts, my flesh and bones will melt away, too! Do not tell her, Fanchon Dodier!" The Indian had picked up this piece of superstition from the white habitans, and, like them, thoroughly believed in the supernatural powers of La Corriveau.

"Well, leave me! get back to the city, and tell Mademoiselle I arrived safe at St. Valier," replied Fanchon, turning to leave them.

The Indians were somewhat taken down by the airs of Fanchon, and they stood in awe of the far-reaching

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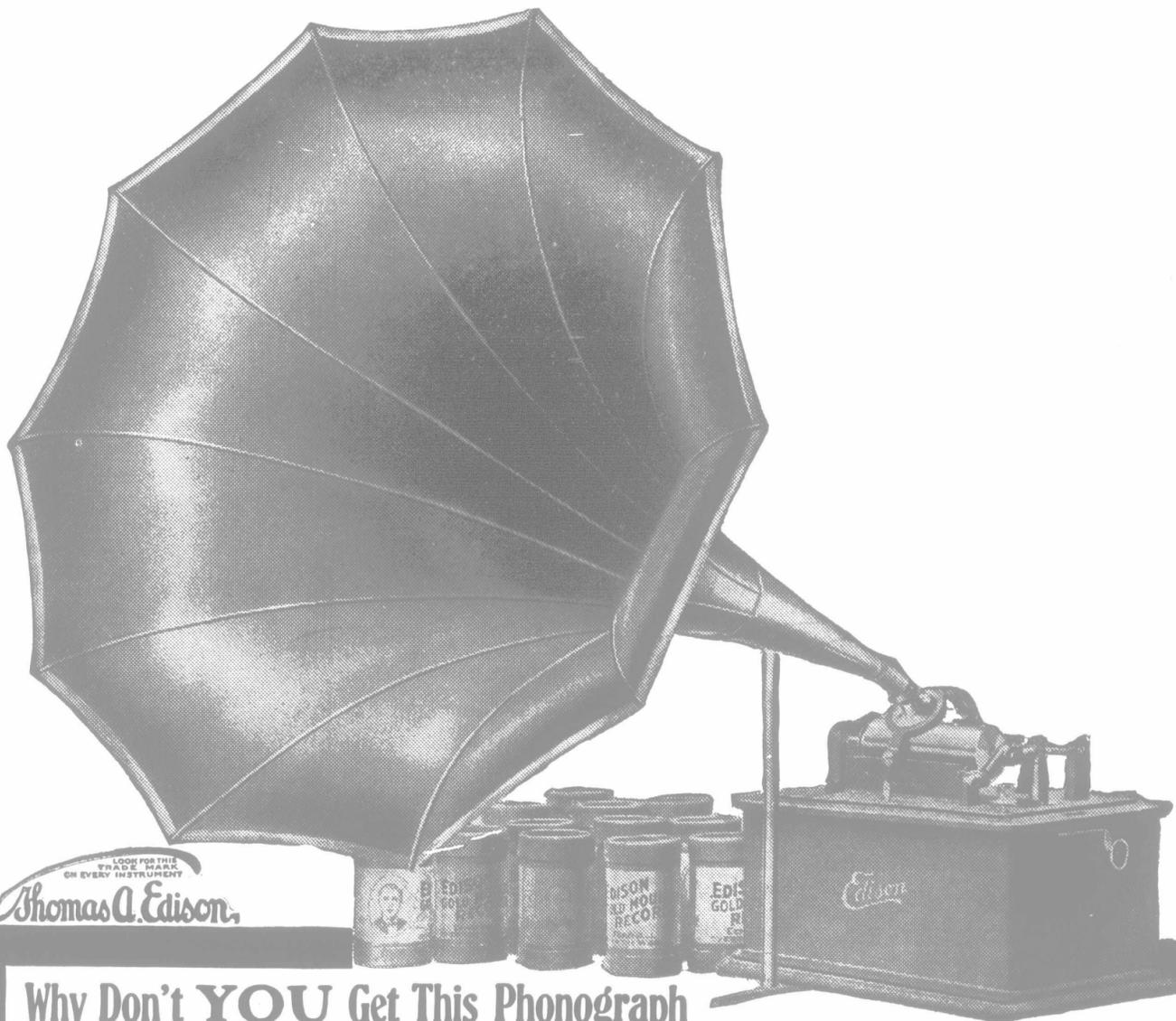
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power of her aunt, from the spell of whose witchcraft they firmly believed no hiding-place, even in the deepest woods, could protect them. Merely nodding a farewell to Fanchon, the Indians silently pushed their canoe into the stream, and, embarking, returned to the city by the way they

the breezy upland lay before Fanchon Dodier. Cultivated fields of corn and meadows ran down to the shore. A row of white cottages, forming a loosely-connected street, clustered into something like a village at the point where the parish church stood, at the intersection of two or three roads, one of which, a narrow, green track, but little worn by the carts of the habitants, led to the stone house of La Corriveau, the chimney of which was just visible as you lost sight of the village spire.

In a deep hollow, out of sight of the village church, almost out of hearing of its little bell, stood the house of La Corriveau, a square, heavy structure of stone, inconvenient and gloomy, with narrow windows and an uninviting door. The pine forest touched it on one side, a brawling stream twisted itself like a live snake half round it on the other. A plot of green grass, ill-kept and

deformed, with noxious weeds, dock, fennel, thistle, and foul stramonium, was surrounded by a rough wall of loose stones, forming the lawn, such as it was, where, under a tree, seated in an armchair, was a solitary woman, whom Fanchon recognized as her aunt, Marie Josephine Dodier, surnamed La Corriveau.

La Corriveau, in feature and person, took after her grandsire, Exili. She was tall and straight, of a swarthy complexion, black-haired and intensely black-eyed. She was not uncomely of feature, nay, had been handsome, nor was her look at first sight forbidding, especially if she did not turn upon you those small, basilisk eyes of hers, full of fire and glare as the eyes of a rattlesnake. But truly, those thin, cruel lips of hers never smiled spontaneously, or affected to smile upon you unless she had an object to gain by assuming a disguise as foreign to her as light to an angel of darkness.

La Corriveau was dressed in a robe of soft brown stuff, shaped with a degree of taste and style beyond the garb of her class. Neatness in dress was the one virtue she had inherited from her mother. Her feet were small and well shod, like a lady's, as the envious neighbors used to say. She never in her life would

wear the sabots of the peasant women, nor go barefoot, as many of them did, about the house. La Corriveau was vain of her feet, which would have made her fortune, as she thought with bitterness, anywhere but in St. Valier.

She sat musing in her chair, not noticing the presence of her niece, who stood for a moment looking and hesitating before accosting her. Her countenance bore, when she was alone, an expression of malignity which made Fanchon shudder. A quick, unconscious twitching of the fingers accompanied her thoughts, as if this weird woman was playing a game of mora with the evil genius that waited on her. Her grandsire, Exili, had the same nervous twitching of his fingers, and the vulgar accused him of playing at mora with the Devil, who ever accompanied him, they believed.

The lips of La Corriveau moved in unison with her thoughts. She was giving expression to her habitual contempt for her sex as she crooned over, in a sufficiently audible voice to reach the ear of Fanchon, a hateful song of Jean Le Meung on women:

"Toutes vous êtes, serrez ou futes,
De fait ou de volonté putes!"

"It is not nice to say that, Aunt Marie!" exclaimed Fanchon, coming forward and embracing La Corriveau, who gave a start on seeing her niece so unexpectedly before her. "It is not nice, and it is not true!"

"But it is true, Fanchon Dodier! if it be not nice. There is nothing nice to be said of our sex, except by foolish men! Women know one another better! But," continued she, scrutinizing her niece with her keen black eyes, which seemed to pierce her through and through, "what ill wind or Satan's errand has brought you to St. Valier to-day, Fanchon?"

"No ill wind, nor ill errand, either, I hope, aunt. I come by command of my mistress to ask you to go to the city; she is biting her nails off with impatience to see you on some business."

"And who is your mistress, who dares to ask La Corriveau to go to the city at her bidding?"

(To be continued.)

GOSSIP.

HODGKINSON & TISDALE'S CLYDES-DALES AND HACKNEYS.

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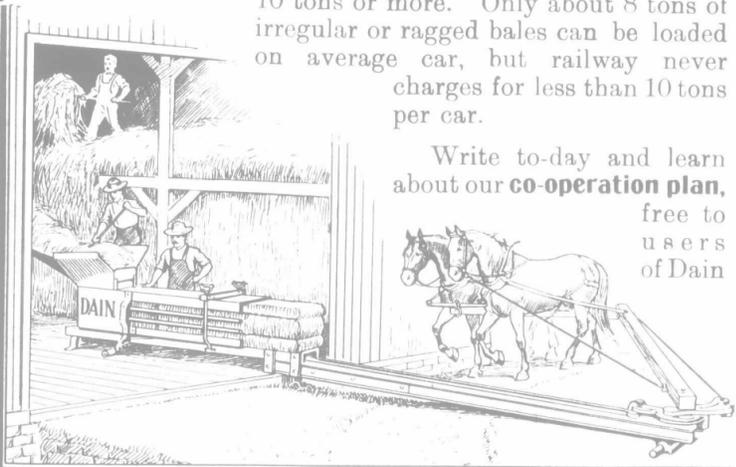
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"SAVE THE HORSE" SPAVIN CURE.



Lynn, Mass., August 5, 1909.

Troy Chemical Co., Binghamton, N. Y.—Enclosed \$6.00 for one bottle of Spavin Cure and one pound of Ointment. I used bottle on a bone spavin last year and it worked to perfection.

W. E. HALLOWELL, 24 Friend Street.

Bay City, Wis., August 10, 1909.

Troy Chemical Co., Binghamton, N. Y.—I bought two bottles of your Save-the-Horse about three years ago for a mare and it did wonders. I worked the mare every day and cured her of two spavins, and she is as sound to-day as when a colt. BEN BENSON.

Geneva, Ind., August 4, 1909.

Troy Chemical Co., Binghamton, N. Y.—I took off a windpuff as big as your hat from the withers of one of my horses. I only used one bottle.

OTTO BOLDS.

\$5.00 a bottle, with legal written guarantee or contract. Send for copy, booklet and letters from business men and trainers on every kind of case. **Permanently cures Spavin, Thoroughpin, Ringbone, Curb, Splint, Capped Hock, Windpuff, Shoe Bolt, Injured Tendons and all Lameness.** No scar or loss of hair. Horse works as usual.

Dealers or Express Paid.

Troy Chemical Company, 148 Van Horn St., Toronto, Ont., and Binghamton, N. Y.

TRIED ANOTHER CONTINENT.

Bill Nye used to tell a story of a lost calf, which may appeal to some of our readers who have spent hours in fruitless search for straying stock. In their boyhood, Bill and his brother had been kept on the search for this calf for a week or more, and had failed to find it. Years afterwards, Bill had been making a tour of Europe. On his return, his brother met him at the station, and his first question was: "Well, Bill, did you see anything of that blame calf?"

QUESTIONS AND ANSWERS. Miscellaneous.

DEFECTIVE BULL.

I have a young bull, ten months old, with, apparently, but one testicle in the scrotum. Kindly advise.

OLD SUBSCRIBER.

Ans.—We would not advise using him for breeding purposes, as a percentage of his get is liable to have the same defect. Better fit him for the butcher, and dispose of him in that way.

SHEEP ON SHARES.

A has a choice flock of sheep that he contemplates giving over to another farmer to feed and care for by the year for him. On what terms could this plan be worked out? What share of the increase or revenue should B receive?

"JERRY."

Ans.—This is one of the questions to which a definite answer cannot be given. It seems as if B should receive at least two-thirds of all increase or revenue from the flock to give him fair recompense for his care and expense. This would yield A very liberal interest on his investment.

CUTTING BACK SPRUCE TREES

Would it do to cut spruce trees back in the fall? I have some that are pretty big and are looking thin, and as if they might die. I thought it might do them good to cut a few feet off the tops. Would it be better to wait till spring? Would it do any good to trim the outside branches? SUBSCRIBER.

Ans.—It would probably be preferable to wait until spring before cutting back, but we have known spruce trees to be cut back in early winter and no harm resulted. Any trimming of side branches should be very light indeed. If cut back beyond where green twigs spring no fresh shoots will be sent forth, the limb will die.

BLUE LETTUCE—HIRING A FARM LABORER.

1. What kind of a weed is the yellow flower enclosed?
2. What variety is the purple?
3. I hire a man for six months; his time commences the last day of February; when is his time up?
4. Can he hire a man to take his place to fill in part of a month who is not nearly equal in ability to himself, and collect full wages? R. K.

Ans.—1 and 2. The yellow flower mentioned must have dropped out, as it was not to be seen. The purple one is probably a blossom of blue lettuce, which is a deep-rooted perennial.

3. August 27th.

4. No; at least not without your consent to the substitution.

DISEASED PEACH TREE.

I am sending you a sample of a twig from a peach tree. Is it peach yellows, or what is the matter? W. F. O.

Ans.—The peach branch is apparently affected with some bacterial disease which I cannot at present distinguish. The presence of peach yellows is best indicated by the yellowing of branches here and there on the tree, and the premature ripening of the fruit on these branches. The diseased fruit shows a peculiar red streaking of the flesh near the pit. Sometimes only one branch of the tree will be affected the first year, and probably half the tree will show the presence of the disease the next year, while three years is about the ultimate duration of affected trees. Whenever the disease shows itself the tree should be cut out and burnt, for there is apparently no remedy for it. H. L. HUTT.

O. A. C.

SCURVY IN PIGS.

I have some young pigs about two months old. They have a disease, which appears to be like ringworm, all over their skin, and it breaks out in sores. They seem to be healthy, and eat well. Could you tell me, through the columns of your paper, what the disease is and remedy? W. A. C.

Ans.—This is mange, or scurvy, caused by a parasite which burrows under the scaly skin, producing irritation. Wash the pigs well with warm water and soft soap then rub in well dry sulphur. In two days repeat the washing and the application of sulphur. A couple

of thorough washings with one of the proprietary coal-tar sheep dips would probably effect a cure, but even with these the preparatory washing with warm soap suds would be very helpful by softening the scales.

THE SPICE OF LIFE.

A new pastor was met by one of his parishioners who was fat and of many years, and who said to the pastor: "You must feed the sheep." The pastor replied: "My dear old man, you do not need food, you need exercise."

They were weighing the new baby, and Ethel was an interested spectator. The weights, all but the four-pound one, were lost. The fond parent of the newly-arrived desired to make a creditable record of weight and began placing on the scales every available article he could find, to be weighed after the baby was removed from the scales. Before this was done, Ethel hastened to the next-door neighbor and reported proudly:

"My little new sister weighs four pounds, a bunch of keys, papa's penknife and an apple."

Some apologies for a blunder are worse than the offence itself. Not long ago a philanthropic lady visited a Canadian almshouse and displayed great interest in the inmates. One old man particularly gained her compassion. "How long have you been here, my man?" she inquired. "Twelve years," was the answer. "Do they treat you well?" "Yes." "Do they feed you well?" "Yes." After addressing a few more sympathetic home questions to the old man, the lady passed on. She noticed a broad and steadily-broadening smile, however, on the face of her attendant, and, on asking the cause, was horrified to learn that the old man was none other than Dr. —, the superintendent. Back she hurried to apologize. "I am so very, very sorry, Dr. —." Here her sincerity notably increased. "I will never be governed by appearances again."

I Cured My Rupture I Will Show You How To Cure Yours FREE!

I was helpless and bed-ridden for years from a double rupture. I wore many different kinds of trusses, and none would hold the rupture. The doctors told me I could not cure it without a surgical operation. But I fooled them all, and cured myself by a simple method which I discovered. Anyone can use it, and I will send the cure free by mail, postpaid, to anyone who writes for it. Fill out the coupon below and mail it to me today.

Free Rupture-Cure Coupon

**CAPT. W. A. COLLINGS,
Box 30 Watertown, N. Y.**
Dear Sir:—I wish you would send me your New Discovery for the Cure of Rupture.

Name

Address

A country minister in the course of his dining out on the circuit, came to a house where roast chicken was served for dinner. He had previously encountered a series of corn-beef dinners, and the chicken looked good.

"Well," he remarked, "here's where that chicken enters the ministry!"

"Hope it does better there than in lay work," rejoined the host.

While Governor of Tennessee, Senator Robert L. Taylor was once approached by an old negro woman who asked a pardon for her husband, sent to the penitentiary for stealing a hog.

"How long has he been in jail?" was asked.

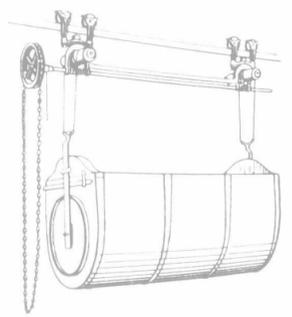
"Goin' on two years now," came the answer, "but law, he ain't no good to them and wa'n't no good to me nohow, an' I speck they'll be glad to get rid o' him."

"Why do you want to get him out if he was of no use to you?"

"To tell the truth, gov'nor, we done gettin' short o' meat."

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Pianos under \$150, \$10 cash and \$4 per month.
Pianos under \$250, \$10 cash and \$6 per month.
Pianos over \$250, \$15 cash and \$7 per month.

A discount of 10 per cent. for cash. In ordering, if there are several instruments you would like, send your second and third choices, in case the first should be sold before your order is received.

ORGANS.

- PRINCE.**—5-octave cabinet organ, in solid walnut case, by Geo. A. Prince & Co., Buffalo; without top, and suitable for school or mission work; has 6 stops, 2 full sets of reeds throughout. Special Sale Price, \$27.00
- KARN.**—5-octave walnut parlor organ, by D. W. Karn & Co., with small extended top, lamp stands, 8 stops, 2 sets of reeds throughout, coupler, and 2 knee swells. Special Sale Price, \$37.00
- DOMINION.**—5-octave walnut organ, by the Dominion Organ Co., Bowmanville, with resonant ends and high back; has burl walnut panels, 8 stops, 2 sets of reeds throughout, couplers, and 2 knee swells. Special Sale Price, \$39.00
- KARN.**—A very attractive 5-octave walnut organ, by D. W. Karn & Co., Woodstock, with attractively decorated pipe top, lamp stands, 10 stops, 2 sets of reeds in the treble, 1 set in the bass, couplers, Vox Humana and 2 knee swells. Special Sale Price, \$47.00
- THOMAS.**—6-octave piano-case organ, by the Thomas Co., Woodstock, in ebonized case, with plain engraved panels and without top; has 13 stops, 4 sets of reeds in the treble, 2 sets in the bass, couplers, 2 knee swells. Special Sale Price, \$59.00
- DOMINION.**—6-octave piano-case organ, by the Dominion Co., Bowmanville, in mahogany-finished case, with fret-carved panels; has double-folding fall board and automatic dust-proof pedal cover, lamp stands, 11 stops, 2 sets of reeds throughout, 2 couplers, 2 knee swells. Special Sale Price, \$71.00
- DOHERTY.**—6-octave piano-case organ, by W. Doherty & Co., Clinton, in mahogany-finished case, of neat design, carved panels, mirror top; has 11 stops, 2 full sets of reeds, 2 couplers, 2 knee swells. Special Sale Price, \$76.00
- THOMAS.**—6-octave piano-case organ, by the Thomas Co., Woodstock, in handsome walnut case, full-length music desk, plain polished panels, decorated in marquetry; has 11 stops, 2 sets of reeds throughout, 2 couplers, 2 knee swells, mouse-proof pedals. Special Sale Price, \$79.00
- DOHERTY.**—6-octave piano-case organ, by the Doherty Co., Clinton, in rich golden-oak case, with full-length polished panels and music desk, mirror top, 11 stops, 2 sets of reeds throughout, 2 couplers and 2 knee swells, lamp stands, mouse-proof protecting pedals. Special Sale Price, \$81.00
- SHERLOCK-MANNING.**—A 6-octave piano-case organ, by the Sherlock-Manning Co., London, in walnut case, with full-length plain polished panels, slightly carved in relief; has 13 stops, 2 sets of reeds throughout, 2 couplers and knee swells, mouse-proof pedals, has been used less than 6 months. Special Sale Price, \$88.00

PIANOS.

- GROVESTON, FULLER & CO.**—A 7-octave rosewood square piano, by Groveston, Fuller & Co., New York; has carved legs and lyre, serpentine mouldings, full iron frame and overstrung scale. Original price, \$400.00. Special Sale Price, \$94.00
- FOX & CO.**—Handsome square piano, by Fox & Co., Kingston, in attractive rosewood case, with carved legs and lyre, serpentine and plinth mouldings, full iron frame, overstrung scale. A good toned piano. Original price, \$400.00. Special Sale Price, \$98.00
- HAYNES BROS.**—A 7½-octave square piano, by Haynes Bros., New York, in handsome rosewood case, with carved legs and lyre, attractive mouldings, full overstrung scale, iron frame, action in splendid order. A fine piano. Original price, \$500.00. Special Sale Price, \$118.00
- DECKER.**—A square grand piano, by the celebrated house of Decker Bros., New York, an exceptionally fine piano, containing the patent "Decker" overstrung scale, iron frame, etc.; has 7 octaves, attractive case, carved legs and lyre, plinth mouldings, etc. Original price, \$600.00. Special Sale Price, \$145.00
- GREAT UNION.**—Cabinet grand upright piano, by the Great Union Piano Co., New York, in ebonized case, with overstrung scale, trichord treble, double repeating action. This piano is in first-class condition, and is specially good value. Special Sale Price, \$195.00
- MENDELSSOHN.**—An attractive upright piano, of small size, modern design of case, with full-length plain polished panels, 3 pedals, practice muffers, 7 octaves. This piano is manufactured by the Mendelssohn Piano Co., Toronto, and has been used less than a year. Is just as good as new. Manufacturer's price, \$275.00. Special Sale Price, \$198.00
- MENDELSSOHN.**—A very handsome mahogany upright piano, by the Mendelssohn Co., Toronto, in case of new design, with full-length plain panels, automatic folding fall board and music desk; has 7½ octaves, 3 pedals, ivory and ebony keys; has been used only a year. Manufacturer's price, \$340. Special Sale Price, \$238.00
- HOWARD.**—A new sample design, by R. S. Howard Co., New York, in beautiful "Early English" mahogany case, crotch-work effect; has full iron frame, bushed tuning pins, trichord overstrung scale, ivory and ebony keys; a beautiful instrument; regular \$350 model, but as it is a sample of a style we do not carry regularly in stock, it must be sold to make room as well as the used instruments. Special Sale Price, \$255.00
- McMILLAN.**—A fine cabinet grand piano, of our own make, in richly-figured walnut case, full-length music desk, plain polished panels, Boston fall board, 3 pedals, the third being sustaining pedal. The piano, in addition, has dulciphone stop for practice. Has been used less than six months. Regular price, \$350.00. Special Sale Price, \$257.00
- GERHARD HEINTZMAN.**—Boudoir grand upright piano, by the Gerhard Heintzman Co., Toronto, in attractive walnut case, of up-to-date design; has full-length polished panels and music desk, ivory and ebony keys, 3 pedals, 7½ octaves, etc. Has been very little used, and cannot be told from new. Manufacturer's price, \$425.00. Special Sale Price, \$278.00
- GOURLAY.**—A beautiful Louis XV. cabinet grand upright piano, of our own make. This piano is in rich San Domingo mahogany, the veneers so arranged as to show a rich contrast between the horizontally and vertically laid mahogany. This piano contains every improvement that it is possible to incorporate in the highest class upright piano, and is our most popular style; has been used less than a year. If we were to make a piano at \$1,000 we could not turn out a finer instrument. Special Sale Price, \$315.00
- GOURLAY.**—A new grand scale Gourlay, "Canada's most nearly perfect piano." This piano is in richly-figured walnut case, of ornate Colonial design. It is in every respect the finest piano that can be manufactured. It has been used professionally about fifteen months, but neither its musical value, its durability nor its handsome appearance has been in any way impaired. Special Sale Price, \$328.00

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GOSSIP.

BURLINGTON SHORTHORNS.

Burlington Junction Station, on the G. T. R., about eight miles east of Hamilton, Ont., and thirty miles west of Toronto, is a point that should be kept in mind by intending purchasers of high-class Shorthorn cattle, for in the immediate vicinity there are no fewer than 275 head to select from, representing several of the most noted herds in Canada. A few days ago, a representative of "The Farmer's Advocate" made a tour of inspection of the herds in this district, and was shown many exceedingly high-class show animals. The first call was at the splendid farm of J. F. Mitchell, the well-known importer and breeder, whose farm lies about half a mile north of the station, and is in charge of Manager Barnett, whose experience in the care and management of Shorthorn cattle is lifelong. Mr. Mitchell and family living in Burlington village, about one mile south of the station. The herd is now about 55 strong, all either imported or bred from imported stock, representing such noted and fashionable blood as the Cruickshank Nonpareils, Duchess of Glosters, Lovelys, Victorias, Butterflies and Cashmores, Marr Stamfords, Roan Ladys and Scotch Thistles, Campbell Clementines and Urys, Gordon Maggies; also Jilts, Cranberrys, Strathallans and Strawberrys, a grand array of breeding females, in good condition, with breeding unsurpassed. In younger females there are 12 yearling heifers, a most interesting lot for intending purchasers. In bulls, there is probably the best selection of imported animals to be found on any one farm in Canada to-day. Redstart (imp.), is a red 2-year-old, by the C. Laverder bull, Sittyton Royal, dam Rosalie 3rd, a Rosebud, by the Rosebud bull, Argyle. This is an exceedingly smooth, even bull, low-down and thick; a right good one. Bandsman (imp.), is a roan yearling, by the great show bull, Newton Crystal, dam Maggie 3rd, a C. Butterfly, by the Mayflower bull, Scottish Farmer; this is a show bull from the ground up; very low, thick, and mellow. Favorite Character (imp.), is a red yearling, by the Missie bull, Sterling Character, dam Rosetta 21st, a Marr Roan Lady, by the C. Amaranth bull, Sittyton's Choice; this is also a low, thick young bull, smooth and sappy. Prince of Characters (imp.), is a red yearling, also by Sterling Character, dam Cinderella, a Roan Lady, by the Janet-bred bull, John Bull; this is a very growthy young bull, and will make a very large animal of even form. Broadmind (imp.), is a roan yearling, by the Maria-bred bull, Scottish Prince, dam Royal Broadhooks, a C. Broadhooks, by the noted show bull, Royal Chief; this is a high-class bull, put up on show lines; an ideal type. Newton Ideal (imp.), is a roan yearling, by the show bull, Newton Crystal, a grandson of the great Corner Stone, dam Newton Ivy, a Strawberry, by Coral Star, by the great Star of Morning; he is a right good sort of modern type. Then there are several exceedingly choice young bulls, Canadian bred, and several show heifers, the whole making a herd of high-class animals, any of which are for sale.

The next visit was to the far-famed herd of W. G. Pettit & Sons, Freeman P. O., whose reputation as breeders and importers of high-class Shorthorns is continental. We found their large herd of 135 head in splendid condition. Practically all their breeding cows are either imported or daughters of imported sires and dams, all the younger ones being the get of their great pair of stock bulls. Imp. Prime Favorite, the Toronto champion of 1907, and Scottish Pride (imp.). Some of the leading matrons in this great herd are Tilbouries Jilt (imp.), by Scottish Prince; Scottish Jilt 2nd (imp.), by same sire; Tilbouries Lady 2nd (imp.), a Roan Lady, by Lord Methuen; Luster 43rd (imp.), by Cyprus; Lady Ann 14th (imp.), by Royal Victor; Waterloo Princess 36th, by Duthie's Choice; Rosetta 10th (imp.), by Scottish Prince; Avarne 10th (imp.), by Cincinnati; Flora MacDonald (imp.), a Brawith Bud, by Clan Alpine; Cinderella 7th (imp.), a Roan Lady, by Scottish Prince; Orange Blossom (imp.), another Roan Lady, by Remus; Roan Lady 4th (imp.), by Scottish Prince. Other families represented are the Broadhooks, Village, C. Butterfly, Lady Dorothy and Duchess of Gloster. Among the younger females are a num-

ber of very choice show animals, prominent among which is the four-year-old Rosetta-bred cow, by Prime Favorite, and her full sister, Rosetta 18th, a senior yearling; these two look like championship winners. Another senior yearling of choice show form is a Primrose, by the same sire. A cracker in the yearling class is a Jilt-bred daughter of Broadhooks' Golden Fame (imp.). Another just as good is a roan yearling, Waterloo Princess, by Prime Favorite (imp.). These are only a sample of the best lot of show heifers, of all ages, the Messrs. Pettit ever had together. The bulls now in the herd are an exceptionally choice lot, with not a poor one among them. The low-down, thick-fleshed, early-maturing type, is characteristic of the whole lot, among which are such royally-bred ones as Bullrush (imp.), a roan two-year-old, by Scottish Farmer, dam a C. Butterfly, by Lancelot; here is one of the right royal stock bulls, immensely thick, and handling soft as a glove. Royal Winner (imp.), is a roan yearling, by Macbeth, dam a C. Bessie, by Cornelius; this is a very growthy young bull that will develop into something choice. Waterloo Favorite is a roan yearling, by Prime Favorite (imp.), dam Waterloo Princess 37th (imp.); this is a show bull all over, very thick, mellow and even. Other younger ones are a roan, ten months, by Bullrush (imp.), dam Roan Lady 5th; this looks like a coming champion. Scottish Leader is a roan yearling, by Scottish Pride (imp.), dam Silver Rose (imp.); a big, sappy bull, of the low, thick type. Limerick is another roan yearling, by the same sire, dam Meg Groat (imp.); he is a big, growthy young bull; a right good sort. For sale, there are two yearling bulls, and eight under a year, among them being some very choice show things.

From here we next called on Porter Bros., Appleby P. O., about four miles from Burlington Station. At this farm, Makle Leaf, the specialties in pure-bred stock are Shire horses, Shorthorn cattle, and White-belted Hampshire hogs. The name of Porter Bros. is comparatively new to readers of "The Farmer's Advocate," but we assure intending purchasers they will not be disappointed in the quality of stock on this splendid farm, nor less in the royal welcome they will receive at the hands of this most hospitable firm. Baron Kitchener [356] is a gray Shire stallion, bred by Lew W. Cochrane, Crawfordsville, Ind., sired by Wenona Mark 361, dam Star 168, by King Charles; he is a grand type of Shire perfection, big, smooth to a turn, and has a vast amount of quality; at Toronto, 1907, in a strong class, he was second; at Chicago, in 1902, he was first, and has won first wherever shown at county shows. Proportion [582], Vol. 30 E, is a gray two-year-old, by Nailstone Ragged Jacket, dam Tuttle Brook Fuchsia (imp.), by Rock's Hero; this colt is quality from the ground up, smooth to a turn, and can go straight and true. Admiral Prince [572] is a bay yearling, by Admiral Togo 399, dam Rose [145], by Pride of Hatfield (imp.); this is a very large colt that will make a ton horse, standing on the best of feet and legs. In females, there is Imp. Tuttle Brook Fuchsia [337], gray six-year-old, by Rock's Hero, dam Dolly, by Warwick; this is one of the best Shire mares ever bred in Canada, quality from the ground up, she won first and championship at Toronto two years ago. Rose [145] is a bay, by Imp. Pride of Hatfield, dam Queen [65], by Chieftain 2nd (imp.); at Toronto she won second in a strong class. Viola [185], bay, by Pride of Morning, dam Violet, a Toronto champion, by Pride of Hatfield (imp.). Viola's Gem 380, is a one-year-old daughter of hers, by Admiral Toga, a high-class filly of quality; a great show filly. This year Viola has a splendid horse colt, by Baron Kitchener, that looks like a winner. The Shorthorns are a big, thick lot. Fancy Lady (imp.), by Prince of the Vale, dam Fancy 11th, by Count, granddam by Gravesend, won first and championship at Ottawa. There are two sons of hers, Halton's Prince, a roan three-year-old, by Ambassador 4190, and Concord, a roan two-year-old, by Halton's Boy 6720. Other families represented in the herd are the Princess Royals and Solinas, among which are half a dozen yearling heifers that will make good buying. Other yearling bulls are Captain Lad, 11 months, by Prime Lancaster =65406=,



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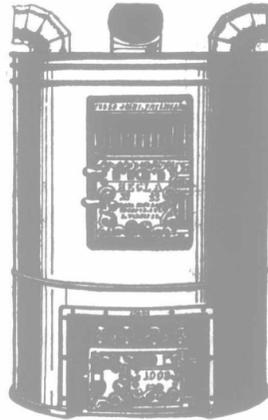
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Dominion Sugar Company, Limited
WALLACEBURG, ONTARIO.

dam Princess Addie 3rd, a Princess Royal, by Diamond Statesman =29139=, and Prince Hero, three months old, by same sire, dam Selina 2nd, by Imp. Scottish Pride. The Hampshire hogs are typical of the breed, the stock boar conforming more closely to an ideal of bacon type than any other we have seen of that now popular breed. The brood sows, too, are all that can be desired in type. For sale, are young things of both sexes, from two to three months of age, a lot that will certainly please their purchaser.

From here we next visited the beautiful farm of A. C. Pettit, 1 1/2 miles east of Burlington Station. Mr. Pettit is essentially a Shorthorn man, and for richness of breeding and individual excellence, his herd of 40 head ranks among the best in the country. Ten of the breeding cows are imported. In blood lines, the herd represents the Miss Ramaden, Diamond, Brawith Bud, Roan Lady, Goldie, Wimple and Jilt tribes, the whole making a high-class herd of Scotch-bred Shorthorns, at the head of which is the richly-bred bull, Imp. Scottish Primrose, by Primrose Fancy, dam Kora 51st, by Sergius, granddam by Brave Knight. He is a bull put up on straight, even lines, and is proving a sire of merit. In young females, there are five two-year-olds and four yearlings, sired by Imp. Prime Favorite, the Toronto grand champion, and Royal Champion, a high-class lot of heifers, and most fashionably bred. In young bulls, there are several, one, a roan yearling, by the Lady Ann-bred bull, Royal Champion, dam Diamond 24th (imp.). Another is a red yearling, by the same sire, dam Goldie of Byres (imp.). Still another is a red, 11 months old, by same sire, dam Ruby of Pine Grove, a Brawith Bud. Another, same age, by same sire, is out of Princess C. (imp.). Parties looking for Shorthorns should visit this herd.

Our next call was to Inverness Stock Farm, the property of W. H. Easterbrook, whose specialty is Shorthorns. His large herd, which is just now in splendid condition, are of the Claret, Wimple, Missie, Cashmere, Dewdrop and Syme strains, imported and Canadian bred, a splendid lot of big, heavy cows, among which are such royally-bred ones as County Belle, a Claret, by Scotland's Pride (imp.), dam Imp. County Maid; Vanda (imp.), a Wimple, by the great Silver Plate. There are two daughters of this cow by Imp. Midshipman. Imp. Ammonia, a C. Cashmere, by Sol. Daphne Fyme 2nd, by Imp. Blue Ribbon, etc. Among the younger things is a roan yearling heifer, a Wimple, by Proud Favorite, a Lustre-bred son of the Toronto grand champion, Prime Favorite (imp.). A right good kind she is, put up on show lines. Another cracker is a white 10-months-old Claret, by the same sire. This heifer would take some beating in any company. Besides these, there are 12 one and two-year-old heifers, nearly all sired by Imp. Midshipman. In young bulls, fit for service, there is only one left. He is Buster, a red yearling, by Proud Favorite, dam Jeanie of Pine Grove, by Oxford Duke 2nd. He is a big, smooth young bull. This farm is one mile west of Burlington Station.

International Farm Tractors Win Three Gold Medals At Winnipeg

At the recent Winnipeg Industrial Exposition, July 7th to 17th, in the **Field Contest of Agricultural Motors**, the International farm tractors were awarded a total of five prizes in all classes, including:

**First Prize in Class A, Gold Medal
First Prize in Class B, Gold Medal
Sweepstakes Prize, All Classes, Gold Medal**

International Harvester Company tractors were entered in but three classes. The Sweepstakes Prize was awarded to the machine securing the greatest number of points in the contest.

We Also Win At Brandon—"Straws Show the Way the Wind Blows"

At the Inter-Provincial Fair at Brandon, July 19th to 23rd, our tractors, entered in two classes, were awarded three prizes. The contests, open to the world, were held under the auspices of the respective Fair Associations, where our farm tractors and all competing machines were placed on trial, day after day, before competent and impartial judges. Canada, England and the United States were represented.

The machines were **officially judged** on their merits. The awards were made on "points"—the judges taking into consideration all the qualities which go to make up the perfect-working farm tractor.

The contest included hauling, threshing, plowing, etc.—all the purposes for which a farm tractor is useful. **It is to Your Interest** not only to know that International farm tractors are being adjudged superior to others, but you ought to know on what those judgments are based. You ought to know something of the strength, ease of operating, convenience and adaptability of these farm tractors, and how they will aid you in enlarging your farming operations.

The International local agent will be glad to go into details with you on the merits of farm tractors and all I. H. C. gasoline engines for farm use. Take the matter up with him, or address the nearest Canadian Branch House.

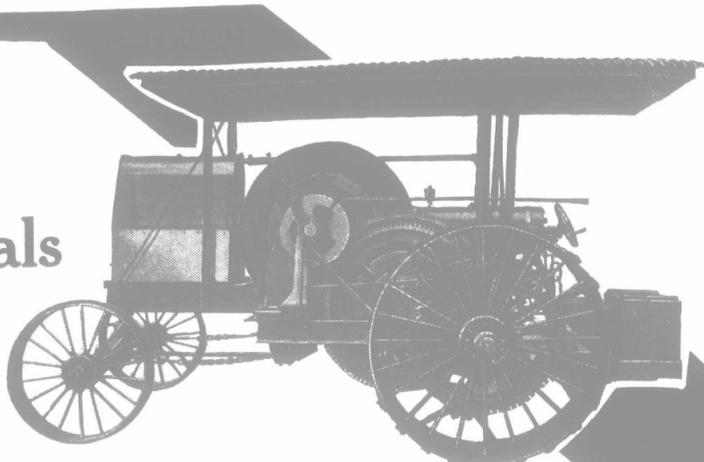
CANADIAN BRANCH HOUSES—Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg.

INTERNATIONAL HARVESTER COMPANY OF AMERICA

CHICAGO

(Incorporated)

U. S. A.



GOSSIP.

Iron stable fittings and furnishings are a specialty of the Tisdale Iron Stable Fitting Co., of Toronto, whose advertisement appears in this paper, and whose exhibit may be seen in the Process Building at the Toronto Exhibition.

Thompson Porter, Dover Court, Toronto, has in this issue of "The Farmer's Advocate," a new advertisement of his fine herd of deep-milking St. Lambert Jerseys, at the head of which is the grand Golden Lad bull, Golden Fox of Dentonia, a Toronto champion, sired by the noted Arthur's Golden Fox. This is a typical dairy bull, of fine character and quality, which, bred to the St. Lambert-bred females in the herd, is producing ideal results, his daughters combining beauty and utility in a high degree, while his sons are, practically, duplicates of their sire.

GRAHAM BROS.' NEW IMPORTATION OF CLYDESDALES.

Graham Bros., of Claremont, Ont., have arrived home with their 1909 importation of Clydesdale stallions and fillies, and Hackney stallions. There were, all told, 18 head: 12 Clydesdale stallions, 3 Clydesdale fillies, and 3 Hackney stallions. The Clyde stallions are: One 5-year-old, one 4-year-old, two 3-year-olds, six 2-year-olds, and two yearlings. We believe we are right in saying this importation is not only the best all-round lot, but they have more size, more quality, more draft character, more style and ranginess of top, and better as movers, than was ever before brought over by this firm, which is saying a great deal, when the phenomenal success of their previous importations at leading Canadian and American shows is taken into account. Among the half-dozen two-year-olds in this lot, there is not more than one that will not make a ton horse, and from that up to 2,200 lbs. or over. They are Duke of Montrose, bay, by Royal Favorite, dam by Baron's Pride; Abbey Blacon, bay, by Pride of Blacon, dam by Darnley's Last; Blacon Cross, bay, by Pride of Blacon, dam by Petruccio, by Prince of Carru-

The Line That Leads and the Reasons Why

"TREASURE" STOVES AND RANGES

excel all others, because they are up-to-date in every particular.

"Treasure" castings are made of No. 1 Pig Iron exclusively.

"Treasure" nickel is whitest, brightest and longest lasting.

"Treasure" stoves are constructed on up-to-date and good-working principles.

It will be interesting to those attending the Toronto Exhibition to visit the "Treasure" exhibit and see our assortment, which is second to none.

Sold by leading dealers all over Canada.

THE D. MOORE COMPANY, LTD., HAMILTON, ONT.



"British Treasure" Range.

chan, Bay Ronald, brown, by Baron Rothschilds, dam by Prince of Millfield (this colt will develop into a champion); Abbey Gale, bay, by Douglas Chief, dam by Prince of Albion (this colt was first at Dumfries; he will make a 2,200-lb. horse); Baron's Fancy, brown, by Baron's Pride, dam by Macgregor; Paul Jones, a black yearling, is by Sir Marcus, dam by Macgregor; this colt will make as flashy a horse as his sire, the Toronto champion last year. Macgregor Blend is a bay yearling, by Benedict, by Baron's Pride, dam by Prince Robert; this colt will take a mighty lot of beating this fall, as he has all the style and quality his skin will hold. Coniston is a bay 3-year-old, by Baron Rowena, dam by Montrave Ruler; this colt has abundant size, quality, smoothness and action, and will grow away over a ton. Scott's Hero, a brown 4-year-old, is by Up-to-Time, dam by Prince of Albion, and, in condition, will easily weigh 2,200 lbs., combined with which is quality and style galore; a right good one he is. Gartley's Pride, a brown 5-year-old, was winner of first at the Highland this year, the first horse with that honor to be brought to Canada in 25 years, sired by Baron's Pride, dam by Prince of Albion, both Highland champions. To size up this horse, as well as all the rest, look them up at the Toronto Exhibition. But one of the very best horses in the Cairn-brogie stables to-day is Royal Choice. He weighs 2,200 lbs., is immensely stylish, and running over with flashy quality. Among the fillies are choice show material, unbeaten in Scotland.

Scott Bros., Highgate, Ont., report the following recent sales of Shorthorns from their herd: One two-year-old bull, to Alex. Houston, Merlin; one eight-month-old bull calf, to E. Orange, Inwood. Have two choice bull calves on hand, one a Bessie, sired by Lord Lieutenant (imp.); dam by Rustic Chief (imp.); grandam imported. This young bull is good enough to head any herd. The other by same sire, and from an extra good milking dam, will make a very large bull. Also have females of all ages for sale, and all will be priced reasonably.

VISITORS TO THE CANADIAN NATIONAL EXHIBITION

Are cordially invited to visit our exhibit of

Iron Stable Fittings and Furnishings

Same being situated immediately inside the main entrance of the Process Building, where our attendant will be pleased to explain the different fittings, etc., in connection with a stable.

THE TISDALE IRON STABLE FITTING COMPANY, LIMITED
19 Temperance St., Toronto, Ont.

HAVE YOU EVER REALIZED THE RESULTS OF "ADVOCATE" ADS.?

WINDSOR
CHEESE SALT

WINDSOR
CHEESE
SALT

The money you get for your cheese depends much on the salt you put in the cheese. Because the flavor—the even color—the smoothness and fineness—the keeping quality—all depend on the way the curd is salted. Windsor Cheese Salt never cakes, but dissolves evenly and stays in the curd. It's all salt—pure and clean—goes farther than any other—and is far cheaper in the end than any imported salt.

QUESTIONS AND ANSWERS.
Miscellaneous.

RIB-GRASS AND NIGHT-FLOWERING CATCHFLY.

Kindly identify the enclosed specimens of weeds. J. A. J.

Ans.—Specimen No. 1 is Plantain, or Rib-grass (*Plantago lanceolata*), usually called by seedsmen, Buckhorn. If a field is badly infested with this weed, it should be plowed and re-sown with clean seed. This plant never gives trouble in cultivated fields.

Specimen No. 2, is Night-flowering Catchfly (*Silene noctiflora*), an annual, or winter annual, which is easily destroyed by good cultivation. In clover, grown for seed, it should be hand-pulled as soon as the flowers open. J. E. HOWITT. O. A. C.

WATER SUPPLY ON FARM.

A rents a farm from B, and in the lease there is nothing said of a water-supply on farm, and in dry time wells fail to supply house and live stock on farm.

1. Can B collect full rent in such case, or, if A is compelled to draw water, has he to do it at his own expense?

2. Or in a place where it is almost impossible to dig to a water supply, could A bring on a drilling outfit and have a well sunk and a pump put in sufficient to supply farm needs, at a reasonable cost, and keep out of regular rent yearly payments on well until it was paid for, supposing A having farm rented for, say, five years?

3. Provided A could bring on outfit and drilled in old well, could B come on him for damages, and could A put well where he thought fit if B was opposed to sinking well? G. Mc. Ontario.

Ans.—1. B can collect the full rent, and A must, if necessary, draw water at his own expense.

2. No.

3. A may drill a well, if he finds it necessary, but he must, if B requires him to do so, fill it in at end of his term and leave the premises in same condition as when he took possession, or as nearly so as reasonably possible.

SOD FOR CORN—SHOCKING TALL CORN.

1. Is once plowing of sod, either this fall or next spring, sufficient for either hill or Western corn next summer? If not, how should it be worked?

2. Would land that has grown buckwheat this summer be all right for seeding with timothy and clover next spring?

3. What is the proper way to shock Western corn, so that it will not fall? R. McL.

Ans.—1. Yes; better than two plowings would be. If plowed in the fall, manure can be put on the surface during the winter or in the spring, and worked in with disk or cultivator. If plowing is deferred till spring, manure can be spread on the surface in the fall, winter, or early spring, and plowed under. If manure is very rough, spring plowing is preferable. Splendid preparation for corn crop is secured by either method. Much will depend, of course, on the thoroughness of the surface working.

2. There is no reason why it should not.

3. Use a jack or horse that is rather high. Set corn up carefully, keeping shock well balanced; that is, not heavier on one side than on the other, and having butts of stalks spread sufficiently to brace well, and yet not too wide. Tie firmly with three bands at different heights, tightening the shock for each band with a rope or strap which encircles the shock and has a ring fastened at one end, through which the other end is passed and drawn strongly.

At the annual auction sale and letting of Hampshire ram lambs from the Bishopstone flock of J. H. Dibben, held at Salisbury, England, six were first let for the season at 10 guineas to 40 guineas, the average being £18 11s. The average for 180 lambs let and sold was £9 17s. 6d. At Carey Coles' sale the same week, eight ram lambs were let for the season at an average of £41 9s. 6d., or over \$200 each, and 80 were sold for an average of £41 9s.



Learn About Paroid Roofing—

Read the facts, then decide

Every year, you're learning how to raise a little more corn to the acre—or oats—or hay. At 40, a man farms better than at 20. That's progressive experience.

Now, we've had a long, progressive experience in making roofing—over 25 years—much more experience than any other roofing manufacturer to-day. So we've learned a lot of things others have yet to find out.

PAROID ROOFING

We've learned how to make the PAROID felt right, because we make it in our own mills. Other manufacturers buy their felt from first one mill, then another—wherever they can get it cheapest. We have the most up-to-date felt mill in the country, equipped with special felting machinery.

We have designed our own saturating and coating machines—have our own special formula for making our waterproof compound—the result of years of experiment and test. This gives the most pliable, smoothest-surfaced, longest-lasting roofing on the market.

Prosinite Roofing

is made to meet the demand for a colored roofing where architectural effect is desired. We use our regular finished PAROID as a base and add an extra weatherproof deep red colored coating by a separate process.

The ornamental edge gives the effect of stained shingles or slate. Especially designed for residences, bungalows, club houses and fine farm buildings.

Neponset Red Rope Roofing

has been the standard low cost roofing for twenty-five years. Costs about the same as tarred felts and other cheap roofings, but lasts three or four times as long. Contains no tar, clean to handle, easy to lay.

OUR GUARANTEE is that we will replace every square foot of roofing that proves to be defective manufacture. If a stronger guarantee than this could be made we would make it. We also make the celebrated NEPONSET WATERPROOF BUILDING PAPER and FLORIAN SOUND DEADENING FELT for dwellings.

Free Books

To the Man Who is Going to Build. Tell us the kind of building or repairing you are planning and we will send you the right book with samples of our products and all of our building suggestions free. Be sure to write us—our advice may save you a costly mistake.

Dealers everywhere sell our roofings.

F. W. BIRD & SON, Makers,
Established 1817.

Dept. 146 Hamilton, Ont.
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Suffering Woman!

READ THIS FREE BOOK!

To any woman who will mail me this coupon I will send free (closely sealed) my finely illustrated book regarding the causes and cure of disorder. This book is written in plain language, and explains many things you should know. It tells how you can cure yourself in the privacy of your own home without the use of drugs.

Don't spend another cent on doctors and their worthless medicines.

Nature's remedy cures to stay cured. You should know about it.

If you suffer from female trouble of any kind, rheumatism, sciatica, weak nerves, insomnia, organic pains, or stomach, liver, kidney or bowel disorders, you must not fail to get this book.

Don't wait another minute.

Cut out this coupon right now and mail it. I'll send the book without delay, absolutely free.

DR. M. S. McLAUGHLIN, 112 Yonge St., Toronto, Can.

Dear Sir,—Please forward me one of your Books, as advertised.

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Office Hours—9 a.m. to 6 p.m. Wednesday and Saturday until 8 30 p.m.
Write plainly.

FLY KNOCKER

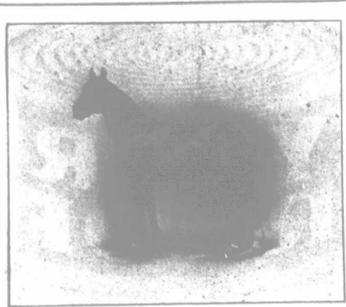
A sure and effective remedy against Flies and Mosquitoes. Is easily and quickly applied with any sprayer. Guaranteed the best preparation on the market. Protects animals effectually from the unendurable torments of FLIES and VERMIN. It is cheap. ONE GALLON applied properly will keep 25 COWS FLY FREE for 2 WEEKS. Cows yield ONE-THIRD MORE MILK when sprayed with FLY KNOCKER. PRICES: 50 cents quart. \$1.75 gallon. Freight paid.

Wm. Cooper & Nephews, 152 Bay St., Toronto, Ont.

Easier on Horses.



Our WIDE-TIRE STEEL WHEELS are easier on horses than narrow-tire wheels. Don't cut into soft ground and drag strength out of horses. Lighter in weight than wooden wheels, yet far stronger, more lasting. Every farmer should have a set. Write for catalogue. Dominion Wrought Iron Wheel Co., Orillia, (Limited) Ontario.



"The Kodak on the Farm"

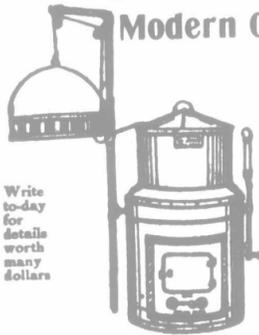
Is the title of a beautifully illustrated little book that contains a score of pictures that show how interesting the Kodak may be made in the country, and it explains clearly the simplicity of the Kodak system of photography—the system that has done away with the dark-room and made picture-taking easy for the amateur.

It shows something of the practical side of photography for the farmer, as well as telling by both pictures and text of the many delights that the camera offers to country people.

Ask your local dealer, or write to us for a free copy of "The Kodak on the Farm."

CANADIAN KODAK CO., LIMITED,
TORONTO, CANADA.

Big Profits with a Modern Canner



Write to-day for details worth many dollars

All the fruit and vegetables which you waste every season can be turned into a handsome profit for you. In your home, your store or on

your farm you can do the same work with a MODERN CANNER as the great Canadian Canning Factories—but on a smaller scale. The MODERN CANNER is made in three sizes: \$30, \$60 and \$90. It Cans 1,000, 2,000 and 4,000 tins in only 10 hours. Just think of that!—and without trouble or waste, and with great ease. Anybody can operate it. Our free catalogue gives you information you certainly will appreciate.

The Modern Canner Co.,
Canadian Branch:
86 KING ST., ST. JACOB'S, ONT



EVERY TEN-CENT PACKAGE OF Wilson's Fly Pads

Will kill more flies than 300 sheets of sticky paper. 4

GOSSIP.

COURT HILL SHORTHORNS.

From a breeder's standpoint of high-class Scotch Shorthorn cattle, few herds in the country can claim precedence over the Court Hill herd, the property of John Brydone, of Milverton, Ont. Few men in the breeding business in Canada invested more money in foundation stock, his first purchase being twelve imported cows, especially selected for their individual excellence and right royal breeding, representing as they do the best of Scotland's blood, the blood that has made Scotch Shorthorns famous the world over. Then, as a fitting climax, he purchased what is acknowledged to be one of the richest-bred bulls that ever crossed the water, Sittyton Victor, the massive roan son of the Missie-bred bull, Merry Morning, by the Highland champion, Pride of Morning, dam Sittyton Violet, by the great William of Orange. Thus he carries a double cross of the blood of William of Orange, two of Roan Gauntlet, and three of Champion of England. Owing to his being at the head of the herd for some years, and a number of his daughters being of breeding age, he has lately been sold to Mr. Dyer, of Columbus, Ont. To take his place, Mr. Brydone has lately purchased from W. A. Dryden the splendid young bull, Contender—72512—, by the Rosemary bull, Imp-Scottish Prince, dam Countess, a Cruickshank Clipper, by the noted sire, Prince Gloster. Contender is one of the best bulls bred at Maple Shade, a low-down, thick, even bull. He is 22 months old, and, as Mr. Brydone has all his heifers safely in calf, he is for sale, a high-class herd-header for someone. On hand, for sale, are several young bulls from 7 months old down, all sired by the old stock bull, and all but one out of imported cows, that exception being out of a Strathallan-bred cow. Also for sale, are six 2-year-old heifers and one yearling, a most desirable lot of heifers on which to found a herd or to strengthen one already founded, as certainly no better bred lot can be found in any herd in the world. Milverton is on both the G. T. R. and C. P. R. lines, easy of access from Toronto, Guelph or Stratford.

TRADE TOPICS.

The heating problem is solved by Clare Bros. & Co., Preston, Ont., in their offer to mail free to applicants, as stated in their advertisement, their catalogue of the "Hecla" Furnace, illustrating its many admirable features. They also offer to plan the entire heating arrangement from a rough sketch of the house to be heated. See their advertisement if interested.

Probably the most remarkable invention of the 20th century, and that which should interest all horse-owners and readers of "The Farmer's Advocate," will be found described in the advertisement of the Whipple Horse Collar Co., which appears in another column of this issue, claimed to be the first successful change in the draft collar in 400 years. Be sure to look up this advertisement and investigate this collar.

GENASCO READY ROOFING.—Genasco Ready Roofing, made by the Barber Asphalt Paving Company, Philadelphia, makes what the manufacturers claim to be a better roof than shingles from every standpoint. Being made of Trinidad Lake asphalt, it doesn't warp, crack, rot or break, but continues to defy storm and weather through its lasting life imparted by the natural oils. Genasco does not need to be laid by an experienced roofer—any handy man can do it, thus saving the labor expense. The Barber Company has issued a valuable little book, the Good Roof Guide Book, which will be mailed on application without cost.

Inside Facts About All Kinds of Roofing

Before deciding on any roofing, for any purpose, send for our free book which will give you the inside facts about all roofings—shingle, tin, tar, iron—and prepared, or "ready" roofings.

This book is fair, frank, comprehensive. It tells all about the cost of each kind of roofing. It tells the advantages and the disadvantages of each, as we have learned them in twenty years of actual test. It is a veritable gold mine of roofing information.

The reason we send it free is because it tells, too, about Ruberoid roofing.

The First "Ready Roofing"

Since Ruberoid roofing was invented, nearly twenty years ago, there have sprung up more than 300 substitutes. Many of these substitutes have names which sound like Ruberoid. Before they are laid and exposed to the weather, they look like Ruberoid. But don't let these facts deceive you.

A roof of Ruberoid is flexible enough to stand the contraction of the cold and the expansion of the sun's hot rays.

It is so nearly fireproof that you can throw burning coals on a Ruberoid roof without danger of the roof taking fire.

It is rain proof, snow proof, weather proof. It resists acids, gases and fumes.

These wonderful properties of Ruberoid are due to the Ruberoid gum which we use—our exclusive product.

Ruberoid roofing also comes in attractive colors—Red, Green, Brown, suitable for the finest homes. These color roofings are made under our exclusively owned patents.

The colors of Ruberoid do not wear off or fade, for they are a part of the roofing.

If you are going to roof, though, learn about all roofs. To get this book, address Department 98L The Standard Paint Company of Canada, Ltd., Montreal.

RUBEROID
(TRADEMARK REGISTERED)

Be sure to look for this registered trademark which is stamped every four feet on the under side of all genuine Ruberoid. This is your protection against substitutes which many dealers brazenly sell as Ruberoid. Ruberoid is usually sold by but one dealer in a town. We will tell you the name of your Ruberoid dealer when you send for our free book.

The Standard Paint Company of Canada, Ltd., Montreal, Canada

New York Hamburg London Paris



FARM LABORERS EXCURSIONS

\$10 GOING.

Via Chicago, Duluth and Fort Frances,

\$18 ADDITIONAL RETURNING.

OR
Via Toronto and North Bay.

Sept. 7 From all stations in Ontario, Toronto-North Bay Line and west. From all stations west of Renfrew.

Sept. 10 From stations, Toronto, Renfrew and east, and east of Orillia.

See nearest Grand Trunk Agent for tickets and particulars regarding Transportation arrangements west of Winnipeg.

CANADIAN NATIONAL EXHIBITION, TORONTO

Very Low Rates From All Points. AUGUST 28 TO SEPTEMBER 11.

Full information from Grand Trunk Agents.

Agents Wanted!

ACTIVE SUBSCRIPTION AGENTS FOR

THE FARMER'S ADVOCATE AND HOME MAGAZINE

WANTED IN EVERY LOCALITY.

Send for terms and sample copies. Specially liberal commission allowed for obtaining new subscribers.

The Farmer's Advocate, London, Ont.

Don't Throw It Away

USE MENDETS

They mend all leaks in all utensils—tin, brass, copper, graniteware, hot water bags, etc. No solder, cement or rivet. Anyone can use them: fit any surface, two million in use. Send for sample pkg., 10c. COMPLETE PACKAGE ASSORTED SIZES, 25c. POSTPAID. Agents wanted. Collette Mfg. Co., Dept. K, Collingwood, Ont.

PEASE "ECONOMY" FURNACE

LESS COAL MORE HEAT.

Manufactured by Pease Foundry Co., Ltd., Toronto, Winnipeg

GOSSIP.

SPRUCE LODGE SHORTHORNS AND LEICESTERS.

At his farm, Spruce Lodge, Tuscarora, Ont., just now, W. A. Douglas has on hand something extra nice in young Shorthorn bulls and heifers, the get of that noted stock bull, Imp. Joy of Morning, a first-prize Toronto winner, and out of choice Scotch and Scotch-topped cows, some of which are exceptionally heavy milkers. The fame of Mr. Douglas as a breeder of high-class stock is an enviable one, and parties looking for something good can always find it in this well-balanced herd. In Leicester sheep, there are on hand a number of very choice shearing rams and ewes, and spring lambs of both sexes. They are a big, strong lot, among which are a lot of show material. Mr. Douglas' farm is only about four miles from Caledonia Station, G. T. R., his post office being Tuscarora.

SMITH & RICHARDSON & SONS' NEW IMPORTATION.

The 1909 importation of Clydesdales, the selection of Smith & Richardson & Sons, Columbus, Ont., arrived home in splendid shape. There are 12 stallions and 1 filly. Among the stallions are one 5-year-old, two 4-year-olds, one 3-year-old, six 2-year-olds, and two yearlings. An outstanding feature, characteristic of the entire lot, is the decided increase in size, compared with the importations of former years, and, as has always been a predominating feature of the horses imported by this firm, they are a particularly nice lot on the ground, carrying that hard, flat quality of bone, well-sprung ankle, and big foot, without which no draft horse will command the second look from a man that knows. Pride of Newmills is the 5-year-old, a beautiful brown, by the noted breeding son of Baron's Pride, Casablanca, dam by Handsome Prince, grandam by Flashwood. He is a horse up to a ton in weight, beautifully turned, and stands on a bottom well-nigh perfect; he has won many prizes in Scotland. Baron Russel is a bay-roan 4-year-old, by the great sire of champions, Baronson, dam by Handsome Prince, grandam by Cairnbrogie Stamp. This is a big horse, of superb quality and stylish finish; one that will please the public and the buyer that wants size and quality. Royal Gretina is the other 4-year-old, sired by Royal Citizen, dam by Prince of Kelton. This is a horse full of draft character, and a Highland winner. Captain Vasey is a brown 3-year-old, by the Royal and Highland first-prize horse, Silver Cup, dam by Sir David. This is a massive, thick, smooth colt, that will make over a ton horse, full of character, and has a grand quality of bottom. Of the six 2-year-olds, four are the get of the H. & A. Society's first-prize horse, Baron of Buchlyvie, probably the best breeding son of the great Baron's Pride. One of them, Dunure Shapely, has for dam a daughter of the noted breeding horse, Prince Shapely, grandam by Prince Alexander. Dunure Souter has for dam a daughter of the renowned Lord Lothian. Dunure Goldlinks' dam is by Douglas Jerrold. Commodore, the other son of Baron of Buchlyvie, has for dam a daughter of Royal Gartly's Heir. Prince of Newton is a son of Baron O'Dee, by Baron's Pride, dam by Ferguson. Baron Onslow is sired by the great Baron's Pride, dam by Prince Frederick. Of the great size, flashy quality, and superb style and form of these colts, too much cannot be said. Among them are future champions that will go the ton or over; certainly the best lot this firm ever imported. Of the two yearlings, one, King's Edict, is by the H. & A. Society's champion, Benedict, by Baron's Pride, dam by the noted breeding horse, Macmeekkan; the other, Baron Crawford, is by the noted Blacon Sensation, dam by the three-times Cawdor Cup champion, Prince of Carruchan. These are a pair of sensational yearlings, the former particularly will make a high-class show horse. The filly is a bay 3-year-old, Queen Minnie, winner of twenty-first prizes, and seven championships, sired by the noted sire of show things, Baron Solway, by Baron's Pride, dam Lady Wilson, by Grenham Goldcrest, by Gold Mine. This filly is up to a big size, and

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MAN
A HORSE
AND A
PLOW**

What's the worth of one horse's day's work? How much do you pay your hired man? Why not save many days' work for both? Turning the soil with a

"Crown" Gang Plow

will do it, besides saving the use of a single plow. Three horses, one man and a "Crown" will do a bigger day's work, and easier, than two men, four horses and two ordinary plows. Get a "Crown," save money, and do your work quicker. The "Crown" is easily adjusted to any depth; three levers work smoothly, all conveniently located. Wheels have dust-proof boxes with roller bearings. Send for Free Plow Book and read complete details.

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at Hanlan's Point, Toronto, demonstrated the splendid fire-resisting qualities of prepared roofing as compared with metal and wooden shingles. The buildings covered with wood and metal were **destroyed**. Those covered with **prepared roofing** were **saved**.

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This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of anyone suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure. Even if you are in the advanced stage of the disease and feel there is no hope, this book will show you how others have cured themselves after all remedies they had tried failed, and they believed their case was hopeless.

Write at once to the **Yonkerman Consumption Remedy Co., 1345 Rose Street, Kalamazoo, Mich.,** and get via their Canadian Depot the book and a generous supply of the New Treatment, absolutely free, for they want every sufferer to have this wonderful cure before it is too late. Write today. It may mean the saving of your life.

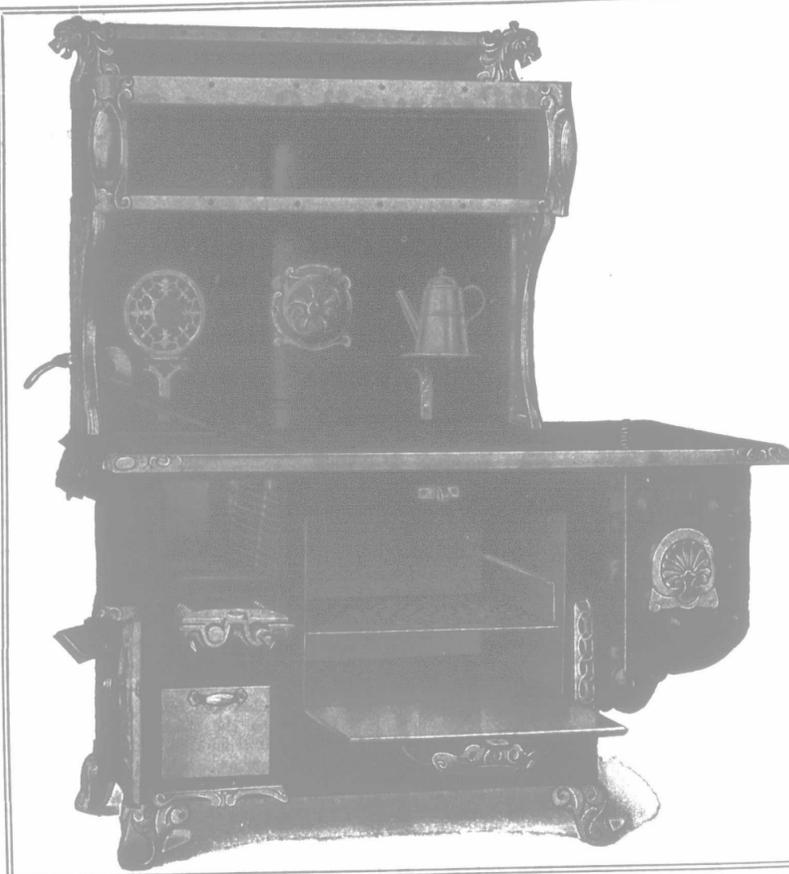
has smoothness and quality all over; she is in foal to the champion, Labori. A large exhibit from this noted stud will be on exhibition at Toronto, where all interested will be given every opportunity to inspect the horses.

Chas. E. Wilson, Port Robinson, Ont., advertises for sale registered Dorset sheep, including an aged ram, ram lambs and ewes.

HICKORY HILL AYRSHIRE.
N. Dymont, Hickory Hill Stock Farm, Clappison, Ont., near Hamilton, who reports his herd of Ayrshires doing well, considering the dry weather and short pastures, advertises for sale four young bulls, ranging in age from six to sixteen months, sired by the richly-bred bulls, Bob Brown of Hickory Hill, and Milk Record (imp.), the former a son of the noted cow, Maggie Brown, which gave, in her four-year-old form, nearly 1,500 lbs. milk in one month, testing 4 per cent. fat. Lady Smith, the dam of one of these young bulls, is the dam of Rosalee of Hickory Hill, that won first in milk test at the Winter Fair, Guelph, last December, and is a Record-of-Performance cow. One has for sire, Burnside Heather King, whose sire and dam were noted sweepstake winners, and his dam is Duchess of Rockton, a persistent milker, of good dairy type. Another is a son of Floss Morton, winner of sweepstakes at London and other fairs. Another is out of Nellie Gray of Hickory Hill, a Record-of-Performance cow that has a record of 63 lbs. in 24 hours, 1,800 lbs. in a month, and has milked in the last five months over 7,600 lbs., and met with an accident that put her back considerably. Females of all ages are also offered. Some from Record-of-Performance cows.

TRADE TOPICS.
MAPLE-SYRUP MAKERS will do well to look up the advertisement in this paper of the Grimm Mfg. Co., Montreal, and call to see their exhibit in the Industrial building at the Toronto Exhibition, or the machinery hall at London or Ottawa, where a full line of their up-to-date sugarmakers' supplies may be seen.

Findlay Bros. Co., Limited stove manufacturers, Carleton Place, Ont., who make a specialty of high-grade Family Steel Ranges, extend a cordial invitation to all the readers of "The Farmer's Advocate" to call and see their exhibit in the stove building at the Toronto Fair. Their Universal Favorite Steel Range advertised in this issue, is specially built to suit the requirements of the Canadian farmer, both as to utility and durability. This firm has a reputation for high-grade goods, and the guarantee that goes with their Universal Favorite Range will satisfy the most exacting purchaser.



THE Universal Favorite

Is a High-class Family Steel Range, honorably built of the best material, and put together as tight as a steam boiler, and is guaranteed to cook and bake perfectly.

NOTE

The spacious firebox for wood.
The large firebox opening, $7\frac{1}{2} \times 8\frac{1}{2}$ inches.
The roomy square oven.
The top-hinged key plate.
Also note how easily the coal grates can be removed.
The linings can be changed from coal to wood, or vice versa, without the disturbing of a bolt.

Lots of room on the top and in the oven to do the busy morning's work.

There are thousands of these Ranges in the homes of the best farmers in the country giving absolute satisfaction.

FOR SALE BY ALL LEADING DEALERS.

We will have a nice display of these Ranges at the Toronto Fair, and cordially invite you to call and see us in the Stove Building.

FINDLAY BROS. CO., LTD.,
CARLETON PLACE, ONTARIO.

QUESTIONS AND ANSWERS. Miscellaneous.

POWDERY MILDEW ON PLUMS AND CHERRIES—PEAR-LEAF BLISTER MITE—OYSTER-SHELL BARK-LOUSE—CATER- PILLARS—GUM ON FRUIT TREES.

In the box which accompanies this letter, you will find curled leaves off of my Reine Claude plum tree. It was just planted last May, and has been watched closely, being near the house. Next in the box you will notice cherry-tree leaves; they are spotted; have something wrong with the under side of them. There are five different kinds, and all are alike. Now, you will notice the pear-tree leaves. They are leaves off of a dwarf pear tree, and most of the leaves on the tree have these black specks on.

I have sent, also, some branches of a lilac tree which are very scaly, some of our apple trees being the same. Now, last of all, two weeks ago I got a worm on a cherry tree called Schmidt's Biggarreau, and the worm had two spots on its back, with the figure ten in each spot. I have kept it in a box for two weeks, and it is much smaller now. I found the second worm yesterday, and placed it in the same box. On opening the box this morning, I found it developing into an insect with wings. When first found, both worms were the same, and on the same tree, in a web, in two different leaves. The tree does not seem to be eaten by them, only the leaves which contained the web were eaten as though they were living on it while developing.

1. Will you tell me the name of the disease of the plum-tree leaves and how to cure them; also whether they are apt to come like that next year if not cared for?

2. Will you kindly name the disease of the cherry-tree leaves, and tell me what to do for them? The cherry trees have had no insects, except a few cherry-tree slugs, and ants.

3. Can you tell me what is wrong with the pear-tree leaves, and what to do for them? They have been like that since spring, and thimble-berry bushes grow under it.

4. Can you tell me what is wrong with the lilac tree, and what to do for it?

5. Can you tell me the name of the worms, and whether they are harmful? If so, what to do for them?

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Highest-grade STEEL HARROWS, both in sections and flexible. (Manufactured in widths to suit purchasers.)

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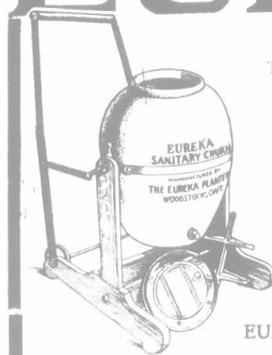
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Money saved is money made. Our make of FARM IMPLEMENTS save time, labor and strength. Therefore, save both money and muscle. OUR MACHINES tell the story of our success. Our motto: Highest quality; one price, and that THE LOWEST.

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Besides being absolutely sanitary, the glass top enables you to see how the churning is coming along without opening the churn.

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 remains 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.

Manufacturers of all kinds of garden tools of finest quality

6. Can you tell me what to do for a Black Tartarian cherry tree, just planted last May, and where the limbs were cut off when the sap is running now; also where the limbs were cut off while in the nurseries, and the thin outside bark is bursting and peeling? MRS. D. R.

Ans.—1. The curling of the plum leaves is due to a fungous disease known as the Powdery Mildew. This may be prevented by spraying with a lime-sulphur mixture. Probably the most convenient way to use it would be to make up six pounds of sulphur and six pounds of fresh lime, to a barrel of water. The lime should be slacked with the sulphur, so as to form what is known as the "self-boiled lime-sulphur mixture."

2. The disease on the cherry leaves is also the Powdery Mildew, but it is not yet developed so far as on the plum leaves. It is seldom that this disease is troublesome enough on either plums or cherries to require treatment.

3. The black spots on the pear leaves are due to the presence of the "pear-leaf blister mite," a very minute insect which works between the layers of the leaf. It is seldom troublesome enough to be of serious injury. Probably the best way to rid the tree of them would be to gather and burn the infested leaves, before the insects mature and take up their winter quarters in the bud scales.

4. The lilac twig is infested with a scale insect known as the "oyster-shell bark-louse." This pest is usually very troublesome on apple trees. The best way to rid the trees of it is to spray them thoroughly with whitewash, after the leaves fall in the autumn, and again on some bright day during winter. The caustic action of the lime loosens the scales from the bark so that the insects beneath are destroyed.

5. The large caterpillars sent in are the larva of a large yellow butterfly, known as the "Yellow Swallow-tail" (*Papilio turnus*). The larva feed upon the leaves of the tree, but are never plentiful enough to do serious harm.

6. The exudation of gum is quite common on trees of any of the stone-fruits, such as cherries, plums, or peaches, where branches have been removed, or where any injury has been done to the bark. The peeling of the bark may have been due to "sun-scald," or some mechanical injury. There is no remedy for this other than covering the injured parts with paint or grafting wax, and allow the new growth to gradually cover the injury.

O. A. C. H. I. HUTT.

Bog Spavin

Cure the lameness and remove the bunch without scarring the horse—have the part looking just as it did before the blemish came.

Fleming's Spavin Cure (Liquid) is a special remedy for soft and semi-solid blemishes—Bog Spavin, Thoroughpin, Splint, Curb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be imitated. Easy to use, only a little required, and your money back if it ever fails.

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describes and illustrates all kinds of blemishes and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.

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We want those who could not take advantage of our offer of a **free trip to CALGARY on Aug. 21th to come with us on Sept. 7th** Write us for free booklet "FACTS," describing the greatest irrigation system on the American continent. Climatic and soil conditions have made the C. P. R. irrigated lands the best available anywhere. No fear of drought. Land capable of producing a maximum amount of hard winter wheat. The terms—one-tenth down, and the balance in nine equal annual payments, or the crop payment plan—should appeal to everyone. Write us for particulars.

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This would be an excellent opportunity to locate South African land grants. We have several for sale at closest prices. Write us.

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that make a horse wheeze, Roar, have Quick Wind, or Choke-down, can be removed with

ABSORBINE

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Clydesdale stallions and fillies. Imported and Canadian-bred. Ayrshires of high-class quality and productivity, 40 to 50 lbs. of milk a day; females of all ages and bull calves. My prices are right.

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FOR SALE:

Registered Hackney Brood Mare

(not bred) by Sister to Hihurst Sensation; dam imp. 92 daughters of Triton's Fireaway; bay; 153; fine driver and worker. Would exchange for heavy draft mare.

Jas. A. Cochane, Lennoxville, P. Q.

GOSSIP.

Robert Miller, Stouffville, Ont., writes: "It is some time since I wrote you regarding my doings in cattle and sheep, so will not attempt to give details of what I have done since that date. There has not been very much doing during the summer, but every week has ended with a transaction or two to its credit, until of late I have had about all that can be attended to comfortably. Horses have been selling freely during the summer, and I have sent a great many to the West, which shows they will pay a good fair price for a good article. Besides good breeding Clydesdale mares, they are taking many of the best geldings of prime ages, different than it used to be, but it pays in the end. Lately, have been selling some small numbers of sheep, to go to the United States, and they go with larger lots, so that the expense of quarantining is not so great. I never had such rams and ewes as I have now, feed is plentiful, and they are in excellent condition, mostly on grass alone, so I can afford to price them so I will hardly miss a customer, and if I can show them, will not miss any. Have just had a most flattering report from an imported Welsh pony that I sent to a little lady at St. Thomas. This is a beautiful pony, with perfect manners, was sold without being seen, and, well, you should just see the letter."

RIVERSIDE HOLSTEINS.

The Riverside herd of Holsteins are still to the fore, under the management of J. W. Richardson, Caledonia, Ont. This is one of the oldest-established herds in the Dominion. For an all-round lot, it is safe to say, that never in its history was it so strong in high-class, richly-bred animals as at present. At the head of the herd is the noted sire, Sir Pietertje Posch De Boer, whose two nearest dams have official records that average 25.67 in 7 days; average test 4.34 per cent. fat. His sire's dam holds the world's record for heifer three years old, 87.62 lbs. milk in 1 day, and 27.07 lbs. butter in 1 week, and his daughters are coming on well, showing large udder development, good conformation and dairy form. Several that have been tested have gone into the Record of Merit. He is assisted by Prince De Kol Posch, a bull of much promise as a dairy sire, showy, and of choice dairy form and conformation, and he is from a long line of heavy producers. His dam, Lady Aaggie De Kol, was winner of championship over all, in three-days' dairy test at the Ontario Provincial Winter Fair at Guelph last winter, and later was officially tested, producing 27½ lbs. butter and 606.13 lbs. milk in one week. She is a sister to Netherland Aaggie De Kol, the Canadian Holstein-Friesian cow that beat all former Canadian records, giving 21,666 lbs. milk and over 700 lbs. butter-fat in one year. Both these cows were bred at Riverside, and are sired by Victor De Kol Pietertje, who was for five years at the head of the Riverside herd. With backing of this kind, the high standard of quality should be kept up.

The third stock bull in service is Highland Veeman Kornlyke, a young bull, full of much promise as a dairy sire. He is sired by King of the Veemans, whose dam is Jessie Veeman A. Her sire, De Kol 2nd's Butter Poy 3rd, has 66 A. R. O. daughters, and 21 proven sons, or sires that have sired official-record cows. Jessie Veeman A. has been termed by experienced judges, "The finest type of dairy cow now living." She is also the only cow of the breed over 26 lbs. to have six A. R. O. daughters.

The herd now numbers over 100 head all told, and they are a choice and even lot, with good conformation, those in milk carrying large, even udders. Over 30 are in the Record of Merit, with records of 10 lbs. for yearlings, to 22 lbs. for aged cows.

In looking over last year's annual report of the Holstein-Friesian Association of Canada, we note that one-sixth of the official tests of females were cows either owned or bred at Riverside.

The herd is strong in the Johanna, De Kol, Wayne, Ormsby, and other noted families.

In one pasture field was counted 21 yearlings and two-year-olds, a choice, even lot. In another pasture were 28 calves, all straight, healthy, and thrifty.

A. J.

Gombault's Caustic Balsam

The Worlds Greatest and Surest Veterinary Remedy

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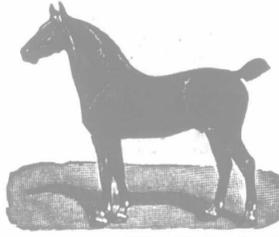
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Have used your GOMBAULT'S CAUSTIC BALSAM to cure curb. I blistered it twice, and there is no sign of it any more. The horse is as good as ever.—**DAN SCHWEB, Evergreen, Ill.**

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My new importation of Clydesdale stallions and fillies, landed a short time ago, are an exceptionally choice lot, full of flashy quality, style and character, and right royally bred. I will sell them at very close prices, and on terms to suit.

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In my new importation of **4 Clydesdale Stallions and 6 Clydesdale Fillies**, I have material that will stand comparison with anything ever imported. They have great size, beautiful mould, full of quality, right fashionably bred and perfect action.

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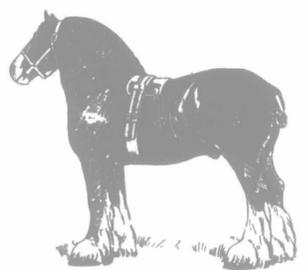
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Money Back if it fails to cure. \$2.00 per bottle postpaid on receipt of price.
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DUNCAN McEACHRAN, F.R.C.V.S., D.V.S., Proprietor.

Importer and breeder of high-class pure-bred CLYDESDALES. Farmers or ranchmen starting breeding Clydesdales, pure or grade, specially invited to correspond.

Please Mention Farmer's Advocate.

GOSSIP.

A Yankee militia captain, whose company was about to march against an invading enemy, thus depicted the awful consequences of the foe's success:

"Gentlemen, they will lay your towns in ashes, murder your wives and children, and pull down your fences."

MAPLE GRANGE SHORTHORNS.

Year by year shows a steady improvement in the type, quality and breeding of the Maple Grange herd of Shorthorns, the property of R. J. Doyle, of Owen Sound, Ont. The herd, whose standard of excellence, characterized by the low-down, thick-fleshed, early-maturing and easy-feeding type, are principally made up of the Claret, Nonpareil and Lavinia tribes, for several years headed by the grand bull, Royal Bruce (imp.), by the Wimple-bred bull, Winning Hope; dam Sunshade, a Bruce Mayflower, by the Cruickshank Lovely bull, Sittyton Yet. With the exception of his sire, practically every other cross in his pedigree is of Cruickshank breeding, while his individuality leaves very little to be desired. Immensely thick of flesh, a strong, well-covered back, a soft, mellow handler, and a sire of living images of his own superior type. Mr. Doyle has for sale a number of one, two and three year old heifers, sired by him, and out of such grand cows as Crissy (imp.), and Dumna-glass Nonpareil (imp.), the former a Claret, the latter a C. Nonpareil; among the lot being granddaughters as well as daughters of these two richly-bred cows; others belong to the well-known Myrtle and the old reliable Lavinia tribes. Parties looking for some extra nice heifers should see this lot. In young bulls there is only one left fit for service. He is Royal Lutin, a red yearling, by the stock bull, and out of a Lavinia-bred cow. Another is 9 months of age, by the stock bull, and out of Myrtle 5th; granddam Myrtle 3rd (imp.). Anything in the herd is for sale, and no fancy prices are asked. All are eligible for registration in the American Herdbook. The farm is situated three miles north of Owen Sound, and is connected with long-distance telephone.

SHROPSHIRE, SHIRES AND CLYDESDALES.

W. D. Monkman, of Bond Head, Ont., the well-known breeder of Shropshire sheep, Shire and Clydesdale horses, and White Wyandotte poultry, was certainly never in as good a position to supply his many customers with choice animals as this year. On his farm, Maple Villa, about equidistant from Bradford station, G.T.R., on the east, and Beeton station, G.T.R. and C.P.R., on the west, just now he has the choicest lot of Shropshire sheep he ever had together. For years this flock has been one of the leading show flocks of Ontario, among them being Royal, Toronto, London and Guelph winners and champions. About half the breeding ewes are imported. This year's main stock sire is a Cooper-bred ram, and a Royal winner, a grand type of Shropshire perfection, and covered from the ground up. About half this season's crop of lambs are by him, the balance by a Canadian-bred ram, a Toronto and London winner, and they are a grand lot of lambs. Mr. Monkman says, away the best lot he ever had, which is saying a great deal, for Shropshires bred in this flock have won all over, including Chicago. They are all for sale, as well as six shearing rams, one of which is imported, and eight shearing ewes, a splendid lot, that intending purchasers should make a note of.

In Shires there is the splendid mare, Imp. Holdenby Cheerful, winner of first at Toronto and London last year in the three-year-old class. She has a grand filly foal, imported in dam, by Holdenby Chattan, that looks like a coming winner of note. In Clydesdales there are one three-year-old mare, sired by Imp. Carlisle, and in foal to Imp. Harmony, a splendid quality filly, eligible for registration; the other, a one-year-old registered filly, by Imp. Harmony. Any or all of these are for sale, and should go quick at the price asked. Mr. Monkman's White Wyandottes are noted for excellence; a great many prizewinners have been bred in this flock. For sale are a large number of this year's cockerels and pullets.

WHIPPLE HUMANE HORSE COLLAR

Protect Your Valuable Horses and Cure Your Suffering Horses—Sold on 15 Days' Trial. Cost No More Than Old-style Collar, Hames and Short Tugs Which They Displace.

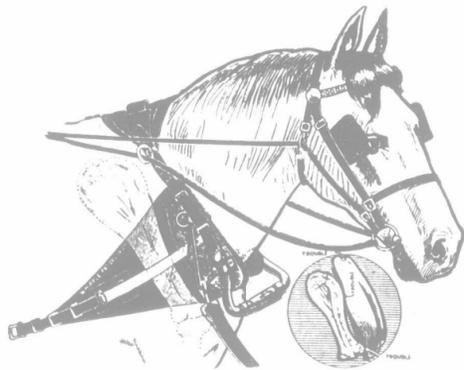
When a man can buy a Whipple Humane Horse Collar that will keep his horse well, it is a crime to torture him with a collar that will make him sore. And it's bad policy from a money-in-your-pocket point of view. We ask you to consider these facts, and decide to try at least one set of Whipple Humane Horse Collars.

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Don't use "sweat pads." It's cruel—especially in hot weather—injures your horses, and costs more in every way. Use Whipple Humane Horse Collars, and your horses will have no more sores—galls or bruised shoulders. No more wasted time. No more loss of valuable horses ruined by sores, bunches or diseased shoulders. No more sweened colts either; can't be. Tell you why. You'll see in a minute from the illustration here, but better in our Free Book, "Horse Collar Sense," or by examining Whipple Humane Horse Collars at your harness dealer's. The simple facts are just these: 1. The pulling surface on these collars is properly distributed. 2. Your horses pull the heaviest load easiest with these collars, because there are 45 square inches of pulling surface on each shoulder as compared with only 10 square inches on old-style hame collars. 3. The burden of pulling comes above the lower shoulder joint, giving the horse a chance to step without bruising the joint where most bruises come. 4. There is no pressure on the thin skin and flesh over the shoulder blade, where so much trouble is caused with old-style collars. 5. No pressure at all on top of the neck or on the windpipe or breast to shut off the horse's breathing.

Every set comes complete and ready to use—less trouble to put on and take off, and fit any horse perfectly all the time by simple adjustment. Built to last for years by expert workmen, and of durable materials. Write us to-day for Free Book and testimonials. Address our nearest factory as below:

Whipple Horse Collar Co., Limited, Hamilton, Canada.



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Clydesdale Studbook of Canada.

We will buy a few copies each of volumes 1, 8 and 12, or will give in exchange any of the following volumes: 2, 3, 4, 5, 6, 7, 9, 10, 11, 13, 14, 15, 16.

To complete sets we can supply to members volumes 2, 3, 4, 5, 6, 7, 9, 10 and 11 at \$1 each. Volumes 13, 14, 15 or 16 may be had for \$2 each. Address:

Accountant, National Live-stock Records, Ottawa, Canada.

T. H. Hassard, Markham, Ont., LATE OF MILLBROOK.

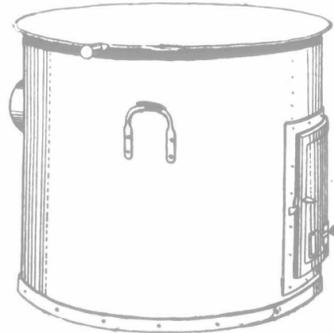
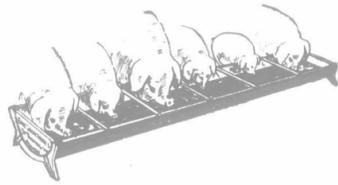
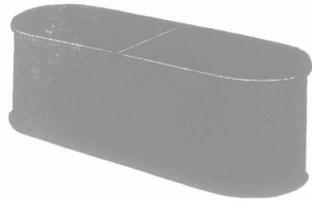
As I have just completed one of the finest stallion barns in Canada, and intend to compete with any opposition in the stallion trade. I have made the largest importations of any firm in Canada the last three years, and the quick sales prove that I always have the right kind of horses, and sell at a right price. I intend sailing for Europe in August, to return with a larger and better importation than ever in September, and, consequently, will not be an exhibitor at the Toronto Exhibition, and would strongly advise intending purchasers to wait and see my stock, and judge for yourselves before buying, and not be governed by some of the judging so frequently done at show fairs. Markham is only 20 miles from Toronto, on the G. T. R., and 3 miles from Locust Hill, on the main line of the C. P. R., where I am always pleased to meet visitors upon short notice, by letter or phone. Long-distance phone in connection.

I TAKE this opportunity to thank my many customers. In the past year I have sold 25 stallions, and every customer pleased. I am going at once to Europe, and intend bringing out something better than ever. Will have a large choice for intending purchasers, and will sell at right prices, and give you right good ones to choose from. I am very careful to select the right kind. Will not be able to attend the Toronto Exhibition. Wait and see my stock. Bolton is 28 miles from Toronto, on Owen Sound Branch, C. P. R. T. D. ELLIOT, BOLTON, ONTARIO.

Clydesdales SMITH & RICHARDSON & SONS, COLUMBUS, ONTARIO.

For Sale: Choice Clydesdale, Hackney and French Coach Stallions; 100 acres 3½ miles from Meaford: Close to school. Soil clay loam, free from stone or gravel. 90 acres level. Good house, barn and stables. \$3,500 for quick sale. Henry M. Douglas, Box 48, Stayner, Ont.

Clydesdales and Hackneys We have for sale a few choice Clydesdale mares, imported and Canadian-bred; also some Canadian-bred Clydesdale stallions. Hackney stallions and mares for sale always. HODGKINSON & TISDALE, BEAVERTON, ONTARIO. G. T. R. and C. N. R. Long distance phone.



These goods are all manufactured and placed on the market by the **ERIE IRON WORKS, LIMITED, ST. THOMAS, ONT.**

Heavy Steel Stock Watering Troughs (galvanized) 6, 7, 8, 10 and 12 feet lengths.
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MR. A. J. HICKMAN
Court Lodge, Egerton, Kent, England
Exports pedigree live stock of every description to all parts of the world. During the fall months the export of horses of the light and heavy breeds will be a specialty. Write for prices, terms and references. Stock ordered is purchased direct from the breeder and shipped straight from his farm to port of entry. In no other way can imported stock be purchased so cheaply.

Aberdeen-Angus Cattle
For Sale: Cows, Heifers, Bulls.

Good strains at reasonable prices. Apply to:
Andrew Dinsmore, Manager,
"Grape Grange" Farm, Clarksburg, Ont.

Aberdeen-Angus Cattle
MALES AND FEMALES FOR SALE. APPLY:
Geo. Davis & Sons, Alton, Ont.

Balmedie Polled Angus—I am offering several exceptionally nice heifers, and a few young bulls. Discriminating buyers will be pleased with what I have to offer. Anything in the herd will be priced.
T. B. Broadfoot, Fergus P. O. and Station.

COURTESY.

Four old Scotchmen, the remnant of a club formed some fifty years ago, were seated around the table in the club-room. It was 5 a. m., and Dougal looked across at Donald and said in a thick, sleepy voice:

"Donald, d'ye notice what an awfu' peculiar expression there is on Jock's face?"

"Aye," says Donald, "I notice that; he's dead! He's been dead these four hours."

"What? Dead? Why did ye no tell me?"

"Ah, no—no—no," said Donald, "A'm no that kind o' man to disturb a convivial evening."

**Suffered More Than
Tongue Can Tell
From Liver Trouble.**

A lazy, slow or torpid liver is a terrible affliction, as its influence permeates the whole system, causing Biliousness, Heartburn, Water Brash, Langour, Coated Tongue, Sick Headache, Yellow Eyes, Sallow Complexion, etc. It holds back the bile, which is required to move the bowels, and lets it get into the blood instead, thus causing Constipation.

Milburn's Laxa-Liver Pills will regulate the flow of bile to act properly upon the bowels, and will tone, renovate and purify the liver. Mrs. J. C. Westberg, Swan River, Man., writes:—"I suffered for years, more than tongue can tell, from liver trouble. I tried several kinds of medicine, but could get no relief until I got Milburn's Laxa-Liver Pills. I cannot praise them too highly for what they have done for me."

Milburn's Laxa-Liver Pills are 25c. per vial, or 5 for \$1.00, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

GOSSIP.

TRING MILKING TRIALS.

In the one-day milk-and-butter trials and test at the Tring Agricultural Society's annual show in Lord Rothschild's beautiful Tring Park on August 5th, no fewer than 87 cows of various breeds and crosses competed. In the class for cows weighing over 900 lbs., F. Brazier's six-year-old Shorthorn, Daisy, won first award, yielding, 50 days after calving, 74 lbs. milk and 2 lbs. 5 ozs. butter; second place in this class was taken by J. Evans' Lincoln Red, Burton Fuchsia, whose yield 114 days after calving was 62 lbs. 12 ozs. milk, and 1 lb. 14½ ozs. butter.

In the class for cows not exceeding 900 lbs. live weight, the first award went to J. H. Smith-Barry's Jersey cow, Caprice, four years old, whose yield 231 days after calving was 40 lbs. 2 ozs. milk and 2 lbs. butter. Second prize went to A. Pocock's Jersey cow, Freegrove Lily, 4½ years old, whose yield, 97 days after calving, was 45 lbs. 4 ozs. milk, and 2 lbs. 4½ ozs. butter.

That show points and butter-production may go hand in hand was clearly shown by the fact that Lady Rothschild's Lady Phyllis, seven years old, which won the championship for the best animal in the inspection classes, was also first and champion Jersey in the butter test, yielding, 127 days after calving, 37 lbs. milk, and 2 lbs. 11½ ozs. butter.

MAPLE VILLA YORKSHIRES AND OXFORDS.

It is always a pleasure to review a flock and herd of sheep and swine that possess the individual merit and high-class type seen in the flock of Oxford Down sheep and herd of Yorkshire swine on Maple Villa farm, the property of J. A. Cerswell, of Bond Head, Simcoe Co., Ont., easily reached from Bradford station, G.T.R., on the east, or Beeton station, G.T.R. and C.P.R., on the west. This flock of Oxfords, numbering about 70 head, and containing many noted prizewinners, and the best lot of breeding ewes obtainable in Canada, has always been kept to the highest standard of excellence, and yearly improved by the use of the very best imported rams. At the time of our visit Mr. Cerswell was awaiting the arrival of a new importation, and is certainly sparing no expense to keep his flock up to the highest possible standard. He has now for sale an exceptionally strong crop of lambs of both sexes, of the thick, growthy, well-covered type; also a thrifty bunch of shearlings, of both sexes. The Yorkshires at Maple Villa possess individual excellence of type to a high degree. The breeding stock are mostly from the famous Summer Hill herd, and are certainly an excellent lot. Just now for sale are some grand young boars fit for service; young sows of breeding age, and a splendid lot of spring pigs of both sexes.

275 BURLINGTON SHORTHORNS 275

4 IMP. SCOTCH SHORTHORN BULLS

One Cruickshank Butterfly (red), 14 months old; one Cruickshank Broadhocks (roan), 14 months old; two Marr Roan Ladys (reds), 13 and 14 months old. Among these are some high-class herd headers and show prospects; also will sell one of my imported stock bulls, and one choice rich roan, 14 months old, imp. sire and dam. Females all ages. Write for catalogue and prices. Farm ¼ mile from Burlington station. Long-distance phone.

FRED. BARNETT, Manager. J. F. MITCHELL, Burlington, Ont.

PRESENT OFFERING:

Two yearling bulls, eight under a year, at very reasonable prices in order to clear; also choice young females, all in show condition. We can sell some extra well-bred cows, bred or with calves at foot, at prices which should interest intending purchasers. Farms close to Burlington Junction Sta. Long-distance phone.

W. G. PETTIT & SONS, Freeman, Ontario.

INVERNESS SHORTHORNS

I can supply Shorthorns of all ages, with richest Scotch breeding and high-class individuality.

W. H. EASTERBROOK, Freeman, Ont.

Imp. Scotch Shorthorns—When looking for Shorthorns, be sure to look me up. Young bulls fit for service, and females all ages; bred in the purple, and right good ones.

A. C. PETTIT, Freeman, Ont.



Maple Leaf Shires, Shorthorns, Hampshire Hogs

One- and two-year-old Shire stallions, females from yearling fillies up; Shorthorns, both bulls and heifers; a choice lot of young Hampshire pigs, both sexes, beautifully belted.

PORTER BROS., APPLEBY P. O., BURLINGTON STATION.

SHORTHORNS

One red bull one year old, one roan bull eleven months. Cows and heifers from Lord Lieutenant, Imp., and some from imported dams.

SCOTT BROS., HIGHGATE, ONT.
M. C. Ry. Office near both stations, P. M. Ry.

Maple Grange Shorthorns

An offering of an extra choice lot of 1-, 2- and 3-year-old heifers. Scotch and Scotch-topped, Clarets, Nonpareils, etc., sired by Royal Bruce, Imp., and among them are daughters and granddaughters of imp. cows. Young bulls also for sale.
R. J. DOYLE, Owen Sound, Ont.
Phone connection.

Pleasant Valley Shorthorns

GEO. AMOS & SON, Moffat, Ont.

FOR SALE: Eight good young bulls of the best Scotch breeding, some of them show bulls; also an extra good yearling bull and several good young cows and heifers. If interested, write or come and see us before buying.

Moffat: 11 miles east of Guelph, on C. P. R.

SHORTHORN SHOW BULL.

Owing to his daughters being of breeding age, I offer for sale my four-year old roan bull, Challenge Plate = 58483 =, by Sailor Champion, by Royal Sailor, imp. dam by Oxford Lad, by Challenge, the best breeding son of the noted champion, Barmpton Hero. Challenge Plate won second at Toronto Exhibition as a yearling, and first as a two-year-old, and was reserve for senior championship. He is entered for Toronto this year.
A. E. MEADOWS, PORT HOPE, ONTARIO.

Shorthorns and Shropshires

Herd headed by Imp. Queen's Counsellor = 64218 = (96594). For sale: Three young bulls; also cows and heifers bred to Queen's Counsellor. The Shropshires are yearling rams and ewes, bred from imported Buttar ram.

H. L. STEAD, Wilton Grove, Ont.
London, G. T. R., 6 miles; Westminster, P. M. R., 1 mile. Long-distance phone.

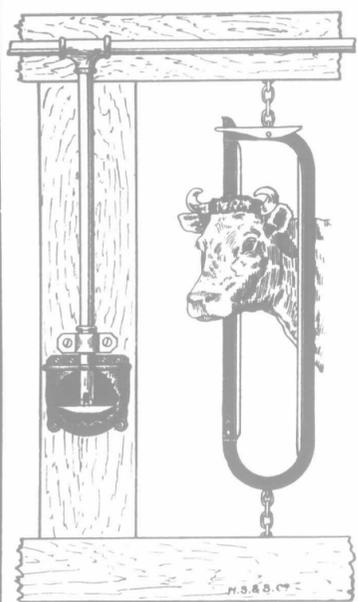


VALLEY HOME SHORTHORNS AND BERKSHIRES

For sale: 4 choice pure Scotch bulls from 12 to 14 months old, and other young bulls from 8 to 10 months old, out of grand milking strains, and some nice young cows and heifers. Our herd numbers about 50 head. Also a smooth, even lot of young Berkshires of both sexes. **S. J. Pearson, Son & Co., Meadowvale P. O. and Sta., C. P. R.**

ONTARIO VETERINARY COLLEGE Established 1862. Taken over by the Provincial Government of Ontario, 1908.

TEMPERANCE STREET, TORONTO, CANADA. Affiliated with the University of Toronto, under the control of the Department of Agriculture of Ontario. College opens Friday, October 1st, 1909. Course of study extends through three college years. Fees, \$75.00 per session. Calendar on application. **E. A. A. Grange, V. S., M. S., Principal.**



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To make your stock comfortable. Any progressive dairyman will tell you that

U-BAR STANCHIONS and ACORN COW BOWLS

will earn their cost many times over by increasing the profits from your herd.

U-BAR STANCHIONS are strong, safe and easy to operate. There is no better stanchion made.

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PRESTON, ONT. MONTREAL, QUE.

Willow Bank Stock Farm
SHORTHORNS AND LEICESTERS.
Herd established 1855; flock, 1848. Am offering a special good lot of young females, bred to the great Duthie bull, Imp. Joy of Morning = 32070 =. Also young bulls and Leicester sheep fitted for showing. Write for prices.
JAMES DOUGLAS, CALEDONIA, ONTARIO.

SHORTHORNS
Nine bulls from 8 to 20 months old, reds and roans. 10 yearling heifers and a few cows. Will sell very cheap to make room in stables.

CLYDESDALES
One pair of bay mares and one dark brown, heavy draft and two spring colts.
JAMES McARTHUR, Gobles, Ontario.

Show Cattle The best bunch ever on the farm. All ages. Not exhibiting this year.
H. Smith, Exeter, Ont.

A FEW YOUNG BULLS and 20 YOUNG COWS and HEIFERS COMPOSE OUR LIST FOR PRIVATE SALE.
J. A. WATT, SALEM, ONTARIO. ELORA STATION, G. T. R. AND C. P. R. FARM ADJOINS TOWN. BELL TELEPHONE.

Shorthorn Cattle AND LINCOLN SHEEP.
Females of all ages for sale of the thick-fleshed, low-down kind that have been raised naturally, neither stuffed nor starved. Twenty-five Lincoln ewes, bred to our best imported stud ram, also a few choice yearling rams. Prices very reasonable for quick sale.
J. T. GIBSON, DENFIELD, ONT.

A. Edward Meyer,
P. O. Box 378, Guelph, Ontario.
Breeds SCOTCH SHORTHORNS Exclusively
Twelve of the most noted Scotch tribes have representative in my herd. Herd bulls: Scottish Hero (imp.) = 55042 = (90065) 29576 A. H. B.; Gloster King = 68708 = 28304 A. H. B. Young stock for sale. Long-distance phone in house.

SOME SHOW PROPOSITIONS IN BOTH MALE AND FEMALE SHORTHORNS
as well as a number of the useful sort of both sexes. Prices right. Large lot to select from. Up-to-date in breeding, etc. Catalogue.
JOHN CLANCY, Manager. H. Cargill & Son, Cargill, Ont.

1854-Maple Lodge Stock Farm-1909
Shorthorn bulls and heifers of extra quality and breeding, and from best milking strains.
Leicesters of first quality for sale. Can furnish show flocks.
A. W. SMITH, Maple Lodge P.O., Ontario. Lucan Crossing Sta., G. T. R., one mile.

Spring Valley Shorthorns.
Herd headed by Clipper Chief (imp.) = 6220 = (94673). If you want to get an imported bull, or a good Canadian-bred one to head your herd, be sure and write, or come and see them. Long-distance telephone.
KYLE BROS., AYR P. O., ONT.
Please Mention Farmer's Advocate.

SHORTHORNS Calves for sale by our grand quartette of breeding and show bulls. Nonpareil Archer, Imp., Proud Gift, Imp., Marigold Sailor, Nonpareil Eclipse. Females, imported and from imported stock, in calf to these bulls. An unsurpassed lot of yearling heifers.
Belmar Parc. John Douglas, Manager. PETER WHITE, Pembroke, Ont.

JOHN GARDHOUSE & SONS
Always have for sale a number of first-class Short-horns, Shires and Lincolns, of both sexes. Drop us a line, or better, come and see for yourself.
HIGHFIELD P.O., ONTARIO.
Weston Sta., G. T. R. & C. P. R. Long-distance phone in house.

Green Grove Shorthorns and Yorkshires
My Scotch Shorthorn herd, among which are many valuable imp. cows, is headed by the A. J. Gordon-bred, Sittyton Butterfly bull, Benachie (imp.) = 69954 =. Present offering: Three choice show bulls now fit for service; also Yorkshires four and five months old, of either sex. **Geo. D. Fletcher, Binkham P. O., Ont.** Erin shipping station, C.P.R.

MAPLE LAWN SHORTHORNS
I am offering for sale young stock, both bulls and heifers, of richest Scotch breeding, and of high-class show type. I can show some of the best young things in the country.
F. W. EWING, SALEM P. O., ONT., ELORA STATION.

HIGH-CLASS SHORTHORNS
I have on hand young bulls and heifers of high-class show type, pure Scotch and Scotch topped, sired by that sire of champions, Mildred's Royal. If you want a show bull or heifer, write me.
GEO. GIER, GRAND VALLEY P. O. AND STA. ALSO WALDEMAR STA.

Shorthorns and Leicesters—A number of choicely-bred young bulls and heifers from grand milking dams and imp. sires. And an extra good lot of rams and ewes of all ages on show from **W. A. Douglas, Caledonia Station, Fuscarora P. O.**
Please Mention Farmer's Advocate.

GOSSIP.

ISALEIGH GRANGE AYRSHIRES.

Isaleigh Grange Farm is noted practically all over this continent as the home of the high-class herd of Ayrshire cattle formerly owned by Mr. Greenshields, of Montreal. On the occasion of the dispersal of that famous herd one year ago, the farm was leased by James Boden, well known to Ayrshire breeders all over this country and the United States, owing to his association as manager and importer for Mr. Reford, of Montreal, of Ayrshires for his farm at Ste. Anne de Bellevue, Que., now the property of Macdonald College. Mr. Boden is known as an expert judge of Ayrshire cattle, and in making the selection for his now high-class herd, he centered his life-long experience in selecting only those that gave evidence of being capable of showing a big balance on the right side of the ledger sheet at the end of the year. A representative of "The Farmer's Advocate" visited the herd a short time ago, looked over the herd, saw them milked, saw the milk weighed, and can safely say that 45-lb.-a-day cows are common in this herd, from heifers up, 30 to 45 lbs. a day each is the order all through. Last year three of them were in the Record of Performance, with the following result: Nancy, a two-year-old, 7,439 lbs. milk and 276 lbs. of butter-fat; Daisy of Carlheim, aged, 12,297 lbs. milk and 386 lbs. butter-fat; Clara Bell, 2 years, 8,457½ lbs. milk; average butter-fat test, a trifle over 4%. Another test for the first-named, Nancy, in her three-year-old form, showed 8,668 lbs. milk; butter-fat test, 4½%. Six are in the test this year, with every promise of going away over the required amount. They are an exceptionally big, strong-constituted lot of cattle, with large, well-balanced udders and large teats, numbering, all told, about 50 head, imported and Canadian bred. The stock bull is White Prince of St. Anne's, sired by Howie's Fizzaway (imp.), a Toronto, London and Ottawa champion; dam White Prim of Ste. Anne's, whose record for the milking season is 9,490 lbs. milk and 450 lbs. butter. Two of her daughters, twins, full sisters to the bull, are: Lady Prim, 9,502 lbs. milk, 455 lbs. butter, and Lady Primrose, 7,167 lbs. milk and 336 lbs. butter, as two-year-olds. During the milking season are records that show the wonderful producing strain that goes to make up the breeding of this bull. From the above it will be seen that Mr. Boden has gotten together a herd that are producers of a high order, and these cows, coupled with so rich a producing-bred bull, should give great results. Among the young bulls for sale are one out of Nancy and another out of Clara Bell, both sired by the stock bull, which should make mighty desirable buying for some shrewd Ayrshire breeders. There are also for sale females of all ages. The farm is connected with long-distance Bell phone, and lies about 3 miles from Danville Station, Que., 90 miles east of Montreal.

SUNNYSLOPE SHORTHORNS.

Excellence excelled, is amply demonstrated in the Sunnyslope herd of Scotch Shorthorn cattle, the property of A. E. Meyer, of Guelph, Ont. Founded, as was this herd, on imported and Canadian-bred selections of the highest standard of excellence procurable, and ever since headed by the very best Scotch-bred sires, it is no more than what might have been expected, the many high-class animals that have been bred in the herd, the majority of which have been sold to breeders from across the lines to raise the standard of excellence of Shorthorns in the United States. The forty-odd now on hand represent, from a breeder's standpoint, practically all the blood strains that have made Scotch-bred Shorthorns famous all over the world. About half the breeding cows are imported, the others being nearly all from imported sire and dam, an exceptionally big, strong, fine-boned animal, weighing 1,600 lbs. being common, and many of these sires and dams are grand milkers, some of them being

udders. A word or two relative to the royal breeding of a few of them may not be amiss. One of the choice ones is an imported Augusta-bred cow, by Grand Favorite, by the great Bapton Favorite. She is a show cow of no mean caliber. Another is a big roan cow, sired by Imp. Lord Mistletoe, and out of Imp. Snowgirl, a big, thick-fleshed cow; Imp. Lettuce is an Ayrshire-bred cow, by Knight of Straithbogic. Then there is a Dimple-bred cow, by Strathallan of Hillhurst; dam Imp. Leucrotia, and a beautiful Brawith Bud bred daughter of the stock bull, Imp. Scottish Hero, and a Broadhooks-bred daughter of Imp. Merchantman, and out of Imp. Silver Bangle. Another is a C. Bellona, by the stock bull, and out of Imp. Rosabel. Several especially choice heifers are on hand just now, notably a red Bessie, that will certainly make a show animal; another is an Ayrshire-bred heifer, about 8 months of age; still another is a roan yearling, out of Imp. Ivy. The main stock bull is Imp. Scottish Hero, one of the best breeding sons of Proud Champion, by Scottish Champion, dam Rosamond, a Cruickshank Rosemary, by the C. Butterfly-bred bull, Netherdale. Scottish Hero has made a name for himself as a sire of high-class animals, equalled by few bulls ever imported, while individually he is up amongst the best of them. Second in service is Gloster King, by Prince Gloster, who has sired so many show animals for the Maple Shade herd; dam Duchess of Gloster 101st. He has thus a double infusion of Duchess of Gloster blood, a better strain than which Scotland never produced. Gloster King is showing wonderful improvement over a year ago, and bids fair to develop into one of the best bulls in Canada, weighing now fully 2,200 lbs., and carrying a wealth of flesh evenly distributed. Mr. Meyer can always show intending buyers something very desirable. The farm is connected with long-distance Bell phone, and is only about one mile from either the G. T. R. or C. P. R. stations at Guelph.

An exceptionally choice lot of young Shorthorns are just now to be seen in the herd of Geo. Gier, of Grand Valley, Ont. The farm is most easily reached from Waldemar station, C.P.R., distant about 2½ miles, and about 4 miles from Grand Valley station. The herd, in blood lines is represented by the Matchless, Claret, Lady Ythan, Gem of Ballechin, Langush, Stamford, Emeline families, and others tracing to Imp. Beauty and Imp. Princess; headed by the noted show bull and sire of champions, Mildred's Royal = 45353 =, an inbred son of that great sire, Royal Sailor (imp.), being sired by the Toronto junior champion, Royal Wonder; he by Royal Sailor (imp.), dam Mildred 8th, by Royal Sailor (imp.), grandam by Clan Stuart. As a show bull, Mildred's Royal's history is too well known to need repeating, and the success of his get at the leading shows where they have won honors from grand championships down, stamps him as among the greatest of Canadian sires. Mention of a few of the leading breeding cows now doing duty in the herd may not be amiss. Matchless 35th, by Imp. Scottish Beau; dam by Imp. Royal Sailor; grandam by the noted champion, Bampton Hero. Matchless 37th, by Bonnie Knight = 52675 =, is a red two-year-old daughter of hers, that is one of the real choice kind, very thick and even, a show proposition. Molly Stamford = 70045 =, by Imp. Scottish Beau; dam Victoria Stamford, by Royal Victor, is another choice cow; she has a yearling daughter, by Mildred's Royal, that is put up on show lines; a real choice heifer. Also out of her is a roan 11-months-old bull, by Mildred's Royal; this youngster will please a most exacting critic, as he is certainly a good one. Emaline 9th, by Marksman, is an imported cow of splendid form. Emaline 15th, by Bonnie Knight, is a daughter of hers. Another out of her is an 11-months-old bull, by Mildred's Royal—a low-down, straight, young bull. Another young bull that looks like a coming champion is a roan, 10 months old, by the stock bull, and traces to Beauty (imp.) on his dam's side. He is certainly something choice. Parties looking for something extra nice, either in heifers or young bulls, should visit the herd, or look up the entry at Toronto Exhibition.

Lump Jaw



The first remedy to cure Lump Jaw was
Fleming's Lump Jaw Cure
and it remains today the standard treatment, with years of success back of it known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it, no matter how old or bad the case or what else you may have tried—your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in Fleming's Vest-Pocket Veterinary Adviser. Most complete veterinary book ever printed to be given away. Durable bound, indexed and illustrated. Write us for a free copy.
FLEMING BROS., Chemists,
75 Church St., Toronto, Ontario

FITS CURED

For proof that fits can be cured, write to
Mr. Wm. Stinson,
134 Tyndall Ave., Toronto, Ontario.
For pamphlet giving full particulars of simple home treatment, 20 years' success, Over 1,000 testimonials in one year. Sole proprietors
Trench's Remedies, Limited, Dublin.

Scotch Shorthorns



Have yet for sale, two extra good bulls, imported, just ready for service; also one good roan Canadian-bred bull, grandson to Patton Chancellor, imp.; also a grand lot of heifers. Write or call on
H. J. Davis,
Woodstock, Ont.
Long-distance Bell 'phone. C. P. R. & G. T. R.

SHORTHORNS, BERKSHIRES, COTSWOLDS.



In Shorthorns: 20 calves, also cows and heifers. A few young Berkshires; and a number of good lambs.
CHAS. E. BONNYCASTLE,
STATION and P. O., CAMPBELLFORD, ONT.

Shorthorn Cows and Heifers.

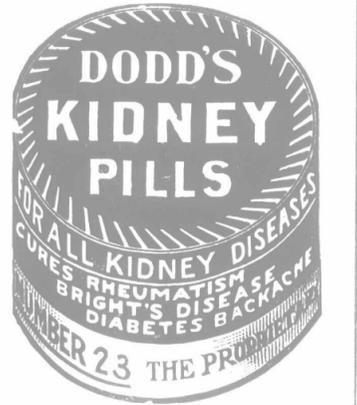
I have Village Maids, Village Blossoms, English Ladies, Lancasters and Wimples for sale. Four with calves at foot, and one yearling heifer fit for any show-ring. One mile east of St. Mary's.
HUGH THOMSON, Box 556, ST. MARY'S, ONT.

Glover Dell Shorthorns



Have several young bulls for sale, of show quality; dark colors, from good milking dams. No fancy prices asked.
L. A. WAKELY, BOLTON, ONT.
Bolton Junction on C. P. R., within 1/2 mile of farm.

"I canna' leave ye thus, Nancy," a good old Scotchman wailed. "Ye're too auld to work, an' ye couldna' live in the almshouse. Gin I die, ye maun marry anither maan, wha'll keep ye in comfort in yer auld age."
"Nay, nay, Andy," answered the good spouse, "I could na' wed anither man, for what wad I do wi' twa husbands in heaven?"
Andy pondered long over this, but suddenly his face brightened.
"I hae it, Nancy," he cried. "Ye ken auld John Clemmens? He's a kind man, but he is na' a member of the kirk. He likes ye, Nancy, an' gin ye'll marry him, 'twill be all the same in heaven—John's nae Christian."



DODD'S KIDNEY PILLS
CURES ALL KIDNEY DISEASES
CORALL RHEUMATISM BRIGHT'S DISEASE DIABETES BACKACHE
NUMBER 23 THE PRO...

GOSSIP.

The introduction of pigs into the Lowlands of Scotland is of comparatively recent date. Early in the eighteenth century, a person in Ruthwell, Dumfriesshire, received as a present the first pig ever seen in those parts, and its advent created no small excitement and alarm. One person who encountered it, described it as "a deil with twa horns"; another as being "like a dog, with two horns and cloven feet, and roaring like a lion"; and a third, still more imaginative, as being "as big as a calf, with eyes like trenchers, and a back like a hedge-hog." In 1760, there were hardly twenty swine in any parish in Dumfries, but ten years later they began to be plentiful, and every farmer had one or two. About the year 1770, large droves of Highland pigs were brought into Annandale and bought by the farmers, more from curiosity than profit. They were exceedingly small, with long bristles on their backs, and were sold, when a year old or upwards, for 4s. or 5s. per head. About this time a market was opened at Longtown, Cumberland, at which a few dead carcasses of pigs were offered for sale once a week during the season, and it is on record that in 1775 a farmer sold four pigs at Longtown Market at 2s. 6d. per stone. There were at that time hardly any curers of bacon in Annandale, and the first woman who cured a pair of hams there was suspected of witchcraft by many of the ancient inhabitants. By the year 1814, ten thousand pigs were fed annually in Annandale, which comprised about twenty parishes. The carcasses weighed, on an average, 14 stones each, the market price at that time being 7s. per stone.

MAPLE GROVE HOLSTEINS.

The Maple Grove herd of Advanced Registry Holsteins, the property of H. Bollert, Cassel, Ont., is one of the oldest-established herds in Canada, being founded 26 years ago on animals selected from the best herds in Holland. This fact, coupled with the care always exercised in the selection of stock bulls, with high official backing, accounts for the many cows that have made high official records and won distinction in the show-rings and dairy tests that have been bred in the herd, which just now is some thirty strong. The main stock bull is the great Sir Abberkirk De Kol 2nd, whose dam, Tidy Abberkirk, was the first cow in Canada to exceed the then magical 25-lb. limit, her record going to 25.48 lbs. in seven days, in an official test. She is also the only cow who has two daughters that surpassed her great record. Tidy Abberkirk De Kol gave 102 lbs. milk in one day, and 26.46 lbs. butter in seven days, and Tidy Pauline De Kol made 26.54 lbs. in seven days. Again, for the third generation, to show the intensive producing breeding of this bull, a daughter of Tidy Abberkirk De Kol made 13.23 lbs. butter 9 1/2 months after freshening, and being again due within three months, this being the world's record for a two-year-old under those conditions, the whole going to prove this bull as being bred from one of the greatest producing families in the world. He is assisted in service by Mercena's Sir Posch, whose dam, Mercena, held the world's four-year-old record of 25.87 lbs. for several years. His sire is a full brother to Alta Posch, who still holds the world's record for under three years, of 25.15 lbs. butter in seven days. We should have said above that Mercena was later sold to the noted F. F. Field herd, of Montello, Mass., for \$1,500. Both these bulls have proven excellent sires, as evidenced by the uniformity of type and quality so prominent in all the young things. The cows of the herd are an exceptionally uniform lot, conforming strictly to the ideal wedged-shaped dairy type, while as producers they amply justify what their grand appearances would indicate. Two-year-olds, with milk records of 12,565 lbs., and butter-fat records of 454 lbs. for the year (85 per cent. basis), Record-of-merit performance, and mature cows from 15,000 lbs. up. From such breeding as this there are for sale young stock, both heifers and bulls. Write Mr. Bollert to Cassel P. O., Ont., or call and see his herd.

HAWTHORN HERD OF DEEP-MILKING Shorthorns



For Sale: 2 young bulls and 10 heifers, sired by Aberdeen Hero (imp.) = 28840 =. Some bred to the Lavender bull, Lavender Lorne = 68706 =.
WM. GRAINGER & SON, Londesboro, Ontario.

GLENGOW Shorthorns



Have two excellent bulls left yet, both about ten months old, and good enough for any herd; also a number of choice heifers, all ages. For particulars write to:
Wm. Smith, Columbus, Ont.

WILLOWDALE SHORTHORNS

I have for sale some very fine young stock bulls and heifers ready to breed. Descendants of Joy of Morning, Broad Scotch and other noted sires. Also **Chester White Swine** and **Imported Clydesdale Horses.**
J. H. M. PARKER, - - - **LENNOXVILLE, QUE.**

WOODBINE STOCK FARM



Offers a few fine young Holstein bulls and bull calves, sired by Sir Mechthilde Posch. Sire's dam holds world's largest two-day public test record, dam Ianthe Jewel Mechthilde, 27.65 lbs. butter in 7 days; average test, 4.46 per cent. fat; out of dams with superior breeding and quality.
Shipping stations—Paris, G. T. R.; Ayr, C. P. R. **A. KENNEDY, Ayr, Ont.**
Please Mention Farmer's Advocate.

Glenwood Stock Farm—Holsteins and Yorkshires.

Holsteins all sold out. Have a few young Yorkshire sows, about 2 months old, for sale cheap. True to type and first-class. Bred from imported stock.
Thos. B. Carlaw & Son, Warkworth P.O., Ont.
Campbellford Station.
Holsteins at Ridgedale Farm—Eight bull calves on hand for sale, up to eight months old, which I offer at low prices to quick buyers. Write for description and prices, or come and see them. R. W. WALKER, Utica P.O., Ont.
Shipping stations: Myrtle, C. P. R., and Port Perry, G. T. R. Ontario Co.

Riverside Holsteins.

Herd contains 100 head; over 30 females in Record of Merit. Headed by Sir Pietertje Posch De Boer, whose dam and sire's dam average 25.87 lbs. butter in 7 days; 87.6 lbs. milk in one day. Prince DeKol Posch, his dam has official 7-day test of over 27 lbs. She was also sweepstakes cow in dairy test at Winter Fair, Guelph.
J. W. RICHARDSON, CALEDONIA, ONTARIO.
Young bulls for sale.

Fairview Herd

offers for sale a son of Rag Apple Korndyke. His dam is a daughter of Pontiac Korndyke, with an A. R. O. record of 13 08 lbs. butter in 7 days at two years. Price, \$150.00.
E. H. DOLLAR, Heuvelton, N. Y.
NEAR PRESCOTT.

Centre and Hillview Holsteins

For sale: 5 choice bulls fit for service now, from dams of extra good backing. Their sires are Brookbank, Butter Baron and Bonheur Statesman. Their dams and sire's dams and grandams average over 24 lbs. butter testing over 4 per cent. in 7 days.
P. D. EDE, Oxford Centre P. O., Woodstock Sta. Ont. Long-distance 'phone, Burgessville.

World's Champion Bred Bull WILL HEAD THE HOMEWOOD HOLSTEINS!



The Maples Holstein Herd! RECORD-OF-MERIT COWS.

Headed by Lord Wayne Mechthilde Calamity. Nothing for sale at present but choice bull calves from Record of Merit dams; also a few good cows at reasonable prices.
WALBURN RIVERS, Folders' Corners, Ont.

BUSINESS HOLSTEINS!

Over 60 head to select from. Milk yield from 60 to 85 lbs. a day, and from 35 to 47 lbs. a day for 2-year-olds. There are 10 2-yr.-old heifers, 8 1-yr.-olds, and a number of heifer calves. Bulls from 1-yr.-old down. Priced right. Truthfully described. **W. HIGGINSON, Inkerman, Ont.**

FOR SALE: COWS AND HEIFERS

All ages. Also bull and heifer calves, including daughter and granddaughters of Pietertje Hengerveld Count De Kol, whose TWO famous daughters made over 32 lbs. butter each in 7 days, and sire of the "world's champion milking cow," De Kol Creamelle, which gave 119 lbs. in one day, over 10,000 lbs. in 100 days. Also for sale daughters of De Kol's 2nd Mutual Paul, sire of Maid Mutual De Kol, which gave over 31 lbs. butter in 7 days, also granddaughters of Hengerveld De Kol. Other leading breeds represented. Putnam station, near Ingersoll.
H. E. GEORGE, **CRAMPTON, ONTARIO.**

Holsteins

the ONLY BULL in the world whose sire has 5 daughters averaging over 30 lbs. of butter in 7 days, and whose dam (26.30 lbs. in 7 days) has a daughter with a record of over 35 1/2 lbs. of butter in 7 days (world's record). Bull calves and cows bred to him for sale. **LAKEVIEW FARM, BRONTE, ONT. W. D. BRECKON, Mgr.**

MAPLE GLEN Holsteins

For sale: Only 1 bull, 11 months old, left; dam is sister to a 26-lb. tested cow. Any female in herd for sale, 7 with records 20 1/4 to 26 1/4 lb. official tests. An 8-yr.-old G. D. of Paul Beets De Kol, in calf to Oakland Sir Maida—her record 21.88 as a 5-yr.-old. Price \$400, or will dispose of herd en bloc, a great foundation privilege. **G. A. Gilroy, Glen Buell, Ont.** Long-distance 'phone connects with Brockville.

MAPLE HILL HOLSTEIN - FRIESIANS

Special offering: Am now offering for first time my stock bull, Sir Mercedes Teake (2489), champion bull at Toronto and London, 1908. Can no longer use him to advantage, as I have twelve of his daughters in my herd.
G. W. CLEMONS, ST. GEORGE, ONT.

Lakeview Herd headed by Count Hengerveld Fayne De Kol, Holsteins



HIGH - CLASS HOLSTEINS!

Head of herd, Pietertje Korndyke Lad. Two nearest dams average 26.09 lbs. butter in 7 days. His sire's dam, Pietertje 2nd, has a record of 31.62 lbs. butter in 7 days. Present offering: 6 heifers safe in calf to this bull. Also 3 bull calves by Mannor Johanna DeKol, out of officially-tested cows.
WM. C. STEVENS, PHILLIPSVILLE, ONT.

Imperial Holsteins!

For sale: Bull calves sired by Tidy Abberkirk Mercedes Posch, whose seven nearest dams have records within a fraction of 27 pounds, out of show cows with high official records. A most desirable lot of coming herd-heads. **W. H. SIMMONS, New Durham P. O., Ont., Oxford County.**

HERE AGAIN! E. & F. MALLORY, Frankford, Ont.

With high-class **HOLSTEINS** for sale, of all ages, except bulls for service. **CHEESE** is HIGH. Why not invest AT ONCE? We sell at BARGAIN prices. Write or call, we're always home. Railway connections good.

Holsteins For Sale: Ten females. Cows and heifers to calve this fall and winter. Cows and heifers bred to Count Calamity Mercedes, sire of champion two-year-old of Canada. If you wish to buy, come and inspect herd. **DAVID RIFE & SONS, HESPELER, ONTARIO.**

Holsteins—Maple Grove offers a few richly-bred young cows, safely in calf to Sir Abberkirk De Kol 2nd and Mercena's Sir Posch; also young stock sired by above bulls. For description and prices write **H. BOLLERT, Cassel, Ont.**

CENTRAL CANADA FAIR

OTTAWA, ONT., SEPTEMBER 10 TO 18, 1909.

A great show this year.
New Grand Stand, one of the finest on the continent.
Return to Night Spectacular.
Greatly increased Prize Lists, especially in Live-stock Departments.
New Buildings, Improvements, and Highest Class of Special Attractions.
45 Special Sweepstake Prizes, including 35 Gold Medals.
New Process Department.
Stock Buildings all renovated and made attractive.
Don't miss the 1909 Exhibition.

Write Secretary **E. McMahon, 26 Sparks St., Ottawa,** for a Prize List.



Stoneycroft Ayrshires

Choice young bulls and heifers of the very best breeding, combining show and dairy quality.

Large Improved Yorkshire Pigs from imported sires and dams, now ready to ship.

Stoneycroft Stock Farm, Ste. Anne de Bellevue, Que.



AYRSHIRES AND YORKSHIRES

We have two choice August and September, 1908, bulls on hand, also some just dropped. FEMALES any desired age. Young pigs of both sexes; good ones ready to ship. As we expect to exhibit at the leading fairs, we will be pleased to meet with intending purchasers and others, and let them examine our herd.

Phone in residence. **ALEX. HUME & CO., MENIE, ONT.**



Just Landed with 50 Head CHOICE AYRSHIRES

Including 12 bulls fit for service, a few August calving cows and two-year-old heifers; cows with records up to 70 lbs. per day. I have a choice lot of two-year-olds, yearlings and heifer calves. Anything in the lot for sale. Correspondence solicited. Phone, etc.

R. R. NESS, HOWICK, QUE.

Ayrshires—Four young bulls, all bred on dairy lines, out of famous dams; fashionable in color, as well as in breeding. Will be sold worth the money. Females all ages.
N. DYMENT, Clappison's Corners, Ont.

CALVES Raise Them Without Milk. Booklet free. The Steele, Briggs Seed Co., Toronto, Ont.

When Writing Please Mention this Paper!

ISALEIGH GRANGE AYRSHIRES!

Our herd were all selected on their ability to produce a heavy yield of milk. We have a number of 40, 45 and 50 lb. cows, imported and Canadian-bred. From them are young bulls and heifers for sale. None better. **JAMES BODEN, DANVILLE, QUEBEC, ISALEIGH GRANGE FARM.**

ARE YOU IN WANT OF A CHOICE BULL TO HEAD YOUR HERD?

We are offering choice bull calves sired by Fountain's Boyle, who won first prize at Toronto, London and Ottawa, who also headed first-prize herd at Toronto and Ottawa. Also offering some choice heifers.

D. DUNCAN, DON, ONT.
DUNCAN STATION, C. N. O.

SPRINGBROOK AYRSHIRES are large producers of milk, testing high in butter-fat. Young stock for sale. Orders booked for calves of 1909, male and female. Prices right. Write or call on **W. F. STEPHEN, Box 163, Huntingdon, Que.**

Ayrshires from a Prizewinning Herd—Have some nice bull and heifer calves for sale at reasonable prices. For particulars, etc., write to **WM. STEWART & SON, Menie P.O., Ont.**

Brampton Jerseys

Canada's premier herd. Dairy quality. Bulls all ages for sale, from best dairy and show cows in Canada, and by best sires. Our herd is 175 strong.

B. H. BULL & SON, BRAMPTON, ONT.



Hampshire Down Sheep.

SPLENDID MUTTON, GOOD WOOL, GREAT WEIGHT.

Unrivalled in rapid and **WONDERFULLY EARLY MATURITY,** hardness of constitution, adapted to all climates, and in quality of **MUTTON AND LARGE PROPORTION OF LEAN MEAT.**

Champion against ALL breeds at the great Smithfield Show, London, 1908.

Full information of

Secretary, Hampshire Down Sheep Breeders' Association, SALISBURY, ENGLAND.

THE GOLDEN LAD BULL,

"Golden Fox of Dentonia," at 3 years old a Toronto champion, at the head of my St. Lambert herd. Some beautiful young stock of both sexes for sale from him.

I. PORTER, 360 St. Clair Ave. Toronto.

SUBSCRIBE FOR "THE FARMER'S ADVOCATE AND HOME MAGAZINE."

GOSSIP.

MAPLE LAWN SHORTHORNS.

Maple Lawn Stock Farm, the property of F. W. Ewing, is situated in Wellington County, 2½ miles from Elora station, G.T.R. and C.P.R., and is the home of one of the choicest herds of Shorthorn cattle in that far-famed Shorthorn district. For right-down, thick-fleshed, easy-feeding type of modern Shorthorns, many of the representatives of this herd will stand comparison with any in the country. Of the Stamford, Nonpareil, Mildred, Claret, English Lady and Martha tribes, their breeding is unexcelled, and their individuality is essentially high-class. Donside Alexandria (imp.) is a Claret-bred cow, of superior type, very thick and very even, sired by Golden Fame; dam Donside Lady, by Clan Alpine. A show proposition of no common order is a roan two-year-old daughter of hers, Donside Claret, by Mildred's Royal; thus this heifer is a half-sister to last year's Toronto grand champion bull, and is certainly put up on show lines. Another of the substantial matrons building up the herd is Mildred 15th, by Imp. Scottish Peer; dam Mildred 5th, by Clan Stuart. She is a white cow, of massive proportions and thickness, weighing about 1,800 lbs.; certainly one of the best cows in the country. Claret Cup =66757= is another grand cow of show form, sired by Orange Victor =38371=; dam by King James. An exceptionally choice daughter of hers is a white seven-months-old heifer, by Imp. Jilt Victor. With a little more fitting this heifer is a show proposition. But the cream of them all is Nonpareil of Avondale =87749=, a roan two-year-old Nonpareil, by Springhurst =44864=; dam Nonpareil 5th, by Imp. Royal Sailor, one of the best-bred heifers in Canada, and one of the best heifers, a candidate for championship honors at Toronto, and is in splendid fit. Among the others are several exceptionally nice Stamfords, from two years up. Anything is for sale, well within its worth. In young bulls for sale are a dark-red one, 10 months old, sired by Imp. Jilt Victor; dam Victoria Stamford, a big, thick, extra good cow, by Royal Victor, a son of Imp. Royal Sailor. This is one of the good young bulls, very thick, very even, and very mellow. He will develop into a high-class show bull. Another is a red, 11 months old, by the same sire; dam English Lady 18th, by Imp. Scottish Beau. This, too, is an extra good young bull, very straight and even. Another is a red, 5 months old, by same sire; dam Martha 12th, by the Village-bred bull, Golden Sunset. Write Mr. Ewing to Salem P.O., Ont.

ROWAN HILL SHORTHORNS.

Rowan Hill Stock Farm, the property of R. F. Duncan, Carluke, Ont., is noted as the home of an exceptionally good-doing lot of Shorthorns, principally of the Roan Duchess tribe, a strain of Shorthorns equalled by few for their ideal, thick, beefy type and easy-feeding qualities. Always in splendid condition, their smooth, plump bodies show them to be possessed of strong constitutions and assimilating powers. Other strains represented in the herd are the Crimson Flowers and Canadian Bracelets, the latter tracing to Imp. Beauty. While the herd is not a large one, the individual type is essentially high. On the sire's side the blood represented is that of Imp. Greengill Archer, Imp. Christopher, and the Missie-bred bull, Heatherman, all of which bulls have left their stamp of excellence on the herd, but none so pronounced as the present stock bull, Royal Chief =65495=, the model son of the great sire, Mildred's Royal; dam the Claret-bred cow, Imp. Crocus, by Clan Alpine; grandam by Gravesend. As is well known, Royal Chief won the senior and grand championships at Toronto last year in the strongest kind of company, and he has gone on improving. His breeding is essentially on show lines; his sire, Mildred's Royal, being winner of first at Winnipeg and Syracuse, N.Y., and third at Chicago as a three-year-old, being handicapped by having to compete in the aged class; he by the Toronto junior champion, Royal Wonder; he by the great Royal Duchess cow, and on his dam's side the two top cows are the two great bulls, Imp. Christopher and Gravesend.

end. With such a bull as this mated with the thick kind of cows in this herd, the result is most gratifying, as the demand for herd-heads bred in this herd is evidence, last year's crop being long since sold out. On hand at present is a roan yearling, Royal King, out of a roan Duchess cow, a daughter of Imp. Christopher. This is one of the kind that develops into a champion; his form is well-nigh perfect, and his handling is soft as a glove. Look him up at Toronto. Another good one is a red, 11 months old, Royal Beauty, out of a Bracelet cow, sired by Imp. Greengill Archer. This bull is well named, for he is certainly a beauty, with faultless lines and a very even form. Both these bulls are sired by Royal Chief. In heifers there are some choice show things that can be seen at Toronto. Write Mr. Duncan, to Carluke P.O. (9 miles from Hamilton).

BALMEDIE ABERDEEN-ANGUS CATTLE.

Just on the outskirts of the Town of Fergus, Ont., is the Balmedie Stock Farm, the property of T. B. Broadfoot, breeder of Aberdeen-Angus cattle. Mr. Broadfoot is one of the most energetic young breeders of the far-famed stock-breeding County of Wellington. His love for pure-bred stock is centered in the Black Dobbies, as the great beef breed, and a look over his splendid herd shows that he certainly exercised great care in the selection of his foundation stock. The stock bull is Elm Park Ringleader 6th, by the great champion, Lord Val 2nd; dam E. P. Belle 2nd. He is a bull of ideal type and quality, proven by the fact that last fall, in very strong company, he won third at Toronto and second at London. The females are an essentially high-class lot, very large and true to type. They are of the Pride, Keepsake, Mayflower and Kyma strains, prominent among them being the 1,800-lb., E. P. Kyma 11th, a cow of superb type and quality, and last fall winning first at Toronto. Representatives of this herd will be on exhibition at Toronto and London, where Mr. Broadfoot will be pleased to meet interested parties. For sale are four two-year-old heifers, four one-year-old heifers, and six heifers under one year; also one yearling bull and one bull calf. This is an exceptionally choice offering, and interested parties should make a note of it.

PEACHBLOW CLYDESDALES AND AYRSHIRES.

Peachblow Stock Farm, the property of R. T. Brownlee, Hemmingford, Que., lies about two miles from Hemmingford station, G.T.R., 18 miles from Howick, and about 44 miles south of Montreal. It comprises 440 acres of agricultural and pasture lands, on which are erected a most complete and commodious set of farm buildings, making one of the extensive stock farms for which Quebec Province is so noted. Mr. Brownlee is a most enthusiastic admirer of pure-bred stock, practically everything on the farm—Clydesdale horses, Ayrshire cattle, Leicester sheep, and Chester White hogs—being registered. For sale just now in Clydesdale stallions is Imp. Harrier [6123], a bay four-year-old son of Baron Mitchell, by Baron's Pride; dam by Lothian King; grandam by King of the Forest; and the Canadian-bred stallion, Ted Jackson of Brookdale [5966], a bay four-year-old, by Imp. Gallant Robert; dam by Imp. Defiance; grandam by Imp. Grand Times. This horse is exceptionally well bred, having six imported crosses. Both are excellent types of the breed, with plenty of character, size and quality. There are also a yearling stallion and a yearling filly that will be priced.

The Ayrshires are an exceptionally choice lot, large and true to dairy type, grand milkers—many of them now milking from 40 to 50 lbs. a day—carrying large, well-balanced udders. The stock bull is Sir Favorite of Hemmingford 27732, a bull of outstanding excellence, and a sire of sterling worth. For sale are females of all ages, and a few bull calves. In Leicesters for sale are this year's crop of lambs of both sexes; also Chester White pigs. Write Mr. Brownlee to Hemmingford P.O., Ont.

QUESTIONS AND ANSWERS. Miscellaneous.

LIABILITY OF MAKER OF A NOTE.

1. A gives a note for borrowed money due in two years from date. B joins A on note by signing his name below A's at bottom of note. If C, the holder of the note, does not collect the amount of note when due (but receives interest regularly), and does not notify B that the note is not paid, is B still liable as security?

2. Should B, if he wishes to be relieved of his liability, notify C that he must collect the note, and that if he (C) does not, that B will not stand liable for it any longer? W. H. G. Ontario.

Ans.—1. B is a maker, not an endorser or backer, and his liability continues until note is paid.

2. Such notice would not avail B anything.

BLUE WEED—HAY ON SHARES—TROUBLESOME TREES.

1. What is the name of enclosed weed? The place next mine is full of it. What is the best way to eradicate it?

2. I took a piece of hay to cut on shares of a man near me; had a witness to bargain. Two or three days after making bargain with me, he sold the hay in field (all of it) to another man.

(1) Whose hay was it? (2) Had he any right to sell it? (3) Can I get damages?

3. My next neighbor has some large maple trees and large pine trees also, against my fence; limbs project over 20 feet. My land would be valuable were it not for the shade of these trees, which are on west side. The limbs are so low I cannot go under with binder. Is there any way for me to have them trimmed, or what can I do to get them out of the way? T. Ontario.

Ans.—1. Blueweed, a biennial, with deep taproot. It does not usually give trouble, except in pastures. It is easily destroyed on cultivated land.

2. It would appear that there was no contract enforceable in a court of law, and that you have, accordingly, no redress. The agreement made with you not being in writing, was not legally binding, and he was, therefore, legally entitled to dispose of the hay as he did.

3. You may trim off the overhanging branches even with your boundary line, but in doing so you must take care not to trespass on your neighbor's property.

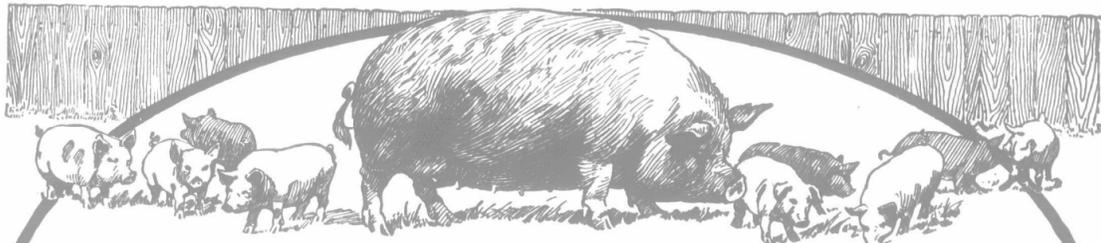
TWO-YEAR ROTATION—BUCKWHEAT AS NURSE CROP.

1. How will it do to work a piece of land to which no manure is applied on a two-year rotation, thus: Oats, clover hay. After the hay is taken off, will it be better to plow the land immediately and keep cultivated till late in the fall, or leave it until a good aftermath has come up and then plow, thus adding to it humus? By working land thus, will its present fertility be maintained, increased, or diminished?

2. I understand that in Ontario buckwheat is sometimes used as a nurse crop. What success attends it as such? How does it compare in this respect with oats? P. E. Island.

Ans.—Good crops might probably be grown for a few years in a two-year rotation such as you mention, but even if manure were applied, it is not unlikely that deterioration in both crops would result after a few years. In England, where at one time a popular rotation was wheat and clover grown alternately, clover sickness—a condition of the soil in which clover-growing was a failure—was induced, and longer intervals between the crops of clover were found to be necessary. No trouble has been as yet reported in this country with clover sickness, but under the system suggested, it might develop to some extent. If no manure were applied, there would be ultimate exhaustion of fertility. Plowing down aftermath would probably be preferable to plowing early.

2. Buckwheat is a smothering crop, and not successful as a nurse crop except occasionally. It is sometimes used as a green crop, to be plowed down as a fertilizer, with good results.



Pork and Profit

If you are feeding hogs for profit, aim to keep them growing every minute of every day, from the time they're farrowed. This is not an impossibility—on the contrary it's easy to do. It is simply a matter of keeping the hog's digestive apparatus in a normal healthy condition, and appetite keen and sharp, so that the hog will steadily receive and put to use a large food ration. This is "The Dr. Hess Idea" of feeding and from successful experiments along this line has come

DR HESS STOCK FOOD

—an animal tonic which every feeder needs to make his work successful. It contains elements which medical authorities have always recommended as beneficial to the stomach and the digestive function. It regulates the bowels and expels poisonous matter from the system enabling the animal to resist the poisonous germs of disease. Sold on a written guarantee and fed twice a day in small doses.

100 lbs. \$7.00; 25 lb. pail \$2.00. Smaller quantities at a slight advance. Duty paid. DR. HESS & CLARK Ashland, Ohio, U. S. A.

Also Manufacturers of Dr. Hess Pan-a-cea and Instant Louse Killer. Free from the 1st to the 10th of each month—Dr. Hess (M. D., D. V. S.) will prescribe for your ailing animals. His 96-page Veterinary Book free for the asking. Send 2c stamp and mention this paper.

DR. HESS POULTRY PAN-A-CE-A

Something to make the hens lay better. To help young chicks to mature earlier and old fowls to fat quicker. In no sense a food, but a tonic preparation to put in food. Dr. Hess Poultry Pan-a-ce-a is the present day foundation of all successful poultry culture. It acts directly on the hen's digestive apparatus; quickens appetite; increases assimilation and makes good health and large production second nature to the fowl. It cures Gapes, Cholera, Roup, etc. A penny's worth feeds 30 hens one day. Sold on a written guarantee.

1 1/2 lbs. 35c.; 5 lbs. 85c.; 12 lbs. \$1.75; 25 lb. pail \$3.50. Duty paid.

Send 2c for Dr. Hess 48-page Poultry Book, free.

INSTANT LOUSE KILLER KILLS LICE

MAPLE VILLA OXFORDS AND YORKSHIRES.

Present offering: Excellent ewes, choice rams, and the best lot of lambs I ever offered; all sired by imported rams. Yorkshires of both sexes and all ages. Boars fit for service. Sows ready to breed. A high-class lot. Satisfaction assured.

J. A. CERSWELL, BOND HEAD P. O., ONT., BRADFORD or BEETON STAS.

SHROPSHIRE AND COTSWOLDS.

I am now offering a choice lot of shearing rams and ewes of both breeds, also a few of the best ram lambs I ever bred. They are large and extra well covered.

JOHN MILLER, BROUGHAM, ONT. Claremont Station, C. P. R.

CATTLE and SHEEP LABELS

F. G. James, Bowmanville, Ont.

Shropshires, Shires and Clydesdales—High-class Shropshires, shearing rams and ewes, ram lambs and ewe lambs, from imported and Canadian-bred stock, show stuff; Shire and Clydesdale fillies; White Wyandotte cockerels and pullets. Prices right. W. D. Monkman, Bond Head P. O., Bradford or Beeton Stations.

I HAVE GREAT, THICK, ROBUST SHROPSHIRE

YEARLING AND TWO-YEAR-OLD RAMS, yearling mares, and a few beautiful Welsh ponies will also be priced at attractive figures.

Robert Miller, Stouffville, Ontario.

Oxford Down Sheep, Shorthorn Cattle, Hogs.

Present offering: Lambs of either sex. For prices, etc., write to John Cousins & Sons, Harriston, Ont. Buena Vista Farm.

For Sale: Dorset Horned Sheep

One ram lamb. One aged ram. Also some ewes. All registered.

Chas. E. Wilson, Box 92, Port Robinson, Ont.

CLAYFIELD Buy now of the Champion COTSWOLD FLOCK of America, 1906. Flock headers, ranch rams, ewes of different ages. All of first-class quality, and prices reasonable. Write, or call on J. C. ROSS Box 61, Jarvis, Ont.

SOUTHDOWNS AND COLLIES.

Orders now solicited for especially-fitted sheep. Your choice of early lambs from imported and prizewinning Canadian-bred ewes, and by the sire of the Grand Champion wether at Chicago, 1907. Twenty shearlings, the choice of last year's lamb crop, also for sale.

Long-distance Telephone. ROBT. McEWEN, Byron, Ont. Ry. Stn., London, Ont.

Farnham Oxford Downs The Champion Flock for Years.

Our present offering is 110 yearling rams; 20 of these fit for the show-ring, and are grand flock-headers. Also 50 yearling ewes, and a number of good ram and ewe lambs. They are all registered and by imported sires or g. sires imported, and a number by imported dams. Our prices are reasonable.

HENRY ARKELL & SON, ARKELL, ONTARIO. Arkell, C. P. R.; Guelph, G. T. R., and Telegraph.

WOOL FOR PRICES.

E. T. CARTER & CO., 84 Front St. E., TORONTO, ONT.

HIDES

Pine Grove Yorkshires

At the late Guelph Winter Show we won decidedly the best of it in the bacon classes. Our Yorkshires are noted for superior excellence. Both sexes and all ages for sale.

J. Featherstone & Son, Streetsville, Ont.



Monkland Yorkshires

We are offering 30 sows from 1 1/2 years to 3 years old that have had litters. All large and excellent sows—proved themselves good mothers. Bred again to farrow in July and August. Also 50 young sows to farrow in August. Jas. Wilson & Sons, Fergus, Ont.

Newcastle Herd of Tamworths, Short-horns and Clydesdales

Present offering: 2 young bulls, 9 months old, at \$75 and \$80 each, both sire and dam first-prize winner at Durham County Fair. Several heifers from 8 months to 3 years old. Prices very reasonable. One registered Clydesdale mare 7 years old, supposed to be in foal again to one of the best horses in the country; regular breeder. A few choice Tam. sows in pig, due in Sept., and a lot of choice young sows from 2 months to 6 months old; all sired by imp. Cholderton Golden Secret. Dam sired by Colwill's Choice. My imp. hog for sale. Long-distance telephone in house. A. A. COLWILL, Box 9, Newcastle, Ont.

MAPLE GROVE YORKSHIRES.

We now offer between 75 and 100 March pigs, sired by our Toronto champion boar, M. G. Champion—20102—, and M. G. Chester—24690—, a boar of great individuality. Pairs not related. Also choice sows for fall farrow. In short, pigs of all ages. Satisfaction guaranteed. Prices very reasonable. H. S. McDIARMID, Fingal, Ont. Shedden Station.

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. and Stn.

PINE GROVE BERKSHIRES.

Sows bred and ready to breed. Nice things, three and four months old.

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SUNNYMOUNT BERKSHIRES

Highest standard of type and quality. For sale: Sows of all ages, and 4 yearling boars. A grand, good lot. Also younger ones. Pairs not akin.

JOHN McLEOD, C.P.R. & G.T.R. Milton P.O., Ont.

Willowdale Berkshires!

Won the leading honors at Toronto last fall. For sale are both sexes and all ages, from imp. stock on both sides. Show things a specialty. Everything guaranteed as represented. J. J. WILSON, MILTON, ONT., P. O. AND STATION C. P. R. AND G. T. R.

MORRISTON & TAMWORTHS.

Now offering 50 young boars 2 to 6 months old. Best breeding. Sired by the two imp. boars, England's Choice and Knowle King David. Also 50 young sows of same breeding.

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OHIO IMPROVED CHESTER WHITES.—Largest strains. Oldest-established registered herd in Canada. Young sows in farrow. Choice pigs 6 weeks to 6 months old. Pairs furnished not akin. Express charges prepaid. Pedigrees and sale delivery guaranteed. E. D. GEORGE Putnam, Ont.

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Imported and home-bred. Sows ready to breed. Boars fit for service, and younger ones either sex. Also Embden geese. MAC CAMPBELL & SONS, HARWICH, ONT.

EXPERIMENT ON "HAY," 1908.
CONDUCTED BY EMSLIE BROS., GLENGAIRN, OAKVILLE, ONT.



	Unfertilized.	Complete Fertilizer.	Without Potash.
Plot	1	2	3
Fertilizer	—	130	— Muriate Potash.
Per acre	—	300	300 Acid Phosphate.
	—	120	120 Nitrate of Soda.
Yield per acre in lbs.	2,232	4,224	3,204

This experiment shows an increase of 1,020 lbs. directly due to an application of POTASH.

LARGER AND EARLIER CROPS OF BETTER QUALITY
CAN BE GROWN BY THE INCLUSION OF
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In a "COMPLETE FERTILIZER" for all FARM, ORCHARD and GARDEN CROPS.

This indispensable plant food can be obtained from all leading fertilizer dealers and seedsmen in the highly-concentrated forms of

SULPHATE AND MURIATE OF POTASH.

Call at our office when visiting the exhibition, or write us for full information and copies of our free literature, including "Potato Crop in Canada," "Fertilizing Root Crops," "Artificial Fertilizers: Their Nature and Uses," "Fertilizing Hay and Grain Crops," "Farmer's Companion," etc., etc.

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Make sure your new range has a steel oven, and "Pandora" name-plate on the door. Go, at once, to nearest McClary Agency and pick out size desired.

McClary's **Pandora** Range

HAVE YOU EVER REALIZED THE RESULTS OF "ADVOCATE" ADS. ?

QUESTIONS AND ANSWERS.
Miscellaneous.

BREEDING A MARE.

Last spring A took his mare to B's horse for the purpose of breeding her. She proved not in season and A left, nothing being said by either party as to returning. About a week later, A, thinking B's horse was getting too much to do, put his mare to a horse belonging to another party. B is now trying to hold A responsible in some way. Has he any grounds for doing so? W. A. J. Ontario.

Ans.—We think not, but cannot say definitely without knowing exactly what was the understanding at the time between A and B.

HOMEMADE CHEESE.

1. Please give some instructions how to make homemade cheese, how much rennet to use to every 10 gallons of milk, how warm to have milk, etc., and any other instructions will be thankfully received.

2. I have been trying to get rennet, but find I cannot obtain any except junket tablets.

FARMER'S WIFE.

Ans.—1. Milk must be of the best quality, and comparatively sweet. If several milkings are used, the earlier ones should be cooled down and kept cool, and also stirred frequently to keep the cream from rising. If the previous day's milk is mixed with the fresh morning's milk, it is usually about ripe enough for cheese-making. Heat the milk to 86 degrees, and weigh or measure it into the vessel in which cheese is to be made. Ten pounds of milk make about one gallon; one gallon of milk makes, approximately, one pound of cheese. As a test for the ripeness of the milk, take out a medium-sized cupful, have it exactly at 86 degrees, place in it a piece of match half an inch long, stir rapidly with a knife, and, while stirring, add a dram (a medium-sized thimbleful) of rennet, stir for 10 seconds after adding the rennet. Then stop stirring, and wait until the match has stopped revolving. This should take about 20 to 24 seconds from the time the rennet was added, depending upon the strength of the rennet and the acidity of the milk. If the cheese is to be colored, add one small teaspoonful of cheese color per cwt. of milk. Add the color to a pint of milk and stir well into the whole lot. Now your milk is ready to set. For ten gallons of milk, use four large teaspoonfuls of rennet. Add the rennet to half a gallon of water and pour in a stream over the milk. Stir well for a minute, then cover with a thick cloth to keep heat in. In 15 or 20 minutes, test by inserting the index finger half an inch into the curd, then pushing it straight under the length of the finger, and cut the curd just over the finger with the thumb, and lift the finger up without bending it. If ready to cut, little or no curd will remain on the finger. When ready, with a long-bladed knife, cut the curd into one-third inch strips, then cut in same size in the opposite way. Then, as best you can, cut into cubes by slanting the knife. Constantly lift the curd from all parts of the vessel with the left hand, and cut with the knife until all are the same size. Scour a deep milk can well on the outside, fill with water and set it right into the curd; keep shifting the can and stirring until the curd has reached 98 degrees. This should take at least half an hour. When this temperature is reached, stir the curd every 10 or 15 minutes, and keep covered. About three hours from the time the rennet was added, the whey may be removed. Strain and put curd on a large square of cheesecloth, sprinkle four ounces of salt to every ten gallons of milk, and mix well. The cheese is now ready for the press, in which it should remain three-quarters of an hour, then be turned, left till next day, turned again and left for a day, then remove from press to a cool place, and turn every day for a month. Do not cut for at least six weeks.

2. The junket tablets referred to are not very satisfactory for cheese-making. Better obtain a supply of rennet from the nearest cheese factory. There are two within six miles of the post office from which our correspondent writes. Or, write some dairy supply company, which will supply rennet at \$1.75 a gallon.

HEADACHE.

In all cases of headache the first thing to do is to unload the bowels and thus relieve the afflicted organs or the over-full blood vessels of the brain; and at the same time to restore tone to the system, re-establish the appetite, promote digestion and invigorate the entire body.

FOR THE BLOOD

will remove the cause of the trouble and restore the system to healthy action and buoyant vigor.

Mrs. J. Priest, Aspdin, Ont., writes:—"I was troubled with headache for several years and tried almost everything without results, until a friend advised me to try Burdock Blood Bitters. I got two bottles, but before I had finished one I was completely cured. I can never say too much for B.B.B."

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SOLID GOLD WATCH PUZZLE
GREAT OFFER BY A RESPONSIBLE FIRM.
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Send your attempt on a sheet of paper, together with stamped addressed envelope for reply, to FELLOWS & CO., Wholesale Watch Merchants, Birmingham, England. The winner is required to purchase a Chain from us to wear with watch. The name of this paper must be mentioned. Prize-winners of last competition were:—

Miss G. Williamson, Box 359, Brampton, Ontario.
Mr. James Empson, Letellier P. O., Manitoba.

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Sufferers from Fits, Epilepsy, St. Vitus' Dance, Nervous Troubles or Falling Sickness should write to LLEBIC CO., 179 King Street, Toronto, for a trial bottle of their Fit Cure and Treatise. Enclose 10c for postage and packing.

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also Iron and Wood Pulleys, Shafting, Hangers, Belting etc., good as new, cheap. Write for prices.

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5-13 QUEEN ST., MONTREAL.

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"The World's Latest and Best."

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Call at our stand and see the only **self-centring, self-balancing, upright bowl.** Built to last a lifetime, the lightest-running machine in the world, and the latest model on the Canadian market.

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The "Premier" is a combination of the best thoughts and practical improvements of long experienced Cream Separator manufacturers.

Our first year in Canada has been a great success.

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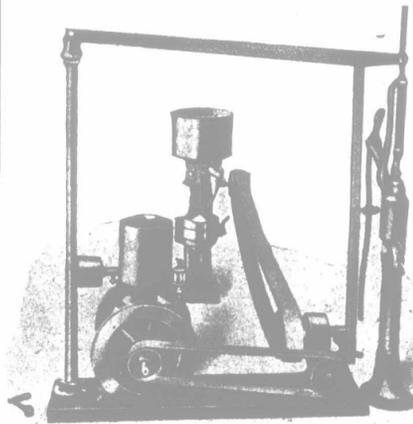
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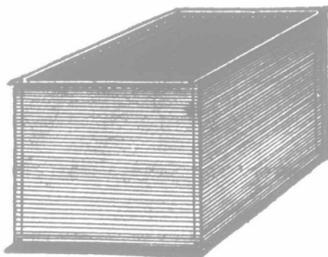
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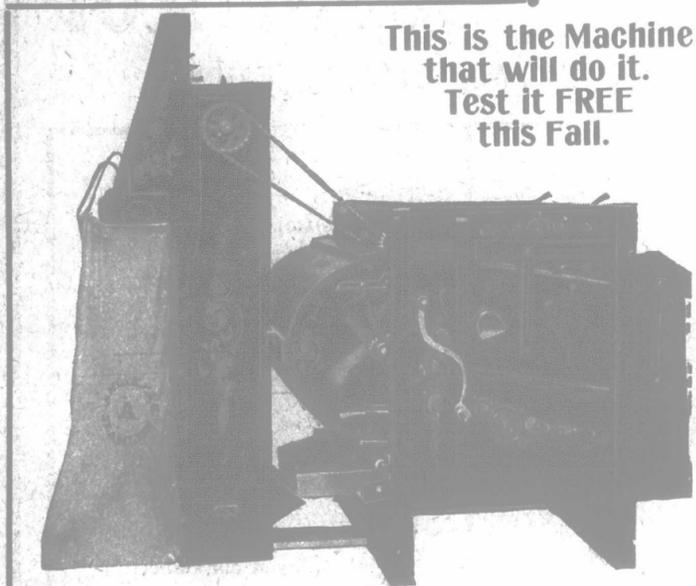
on the farm if you are not fitted up with good Storage Tanks. You can have all the luxury of city life for a very small outlay. Our Barn and General Storage Tanks are made of heavy galvanized steel of the best quality, imported from the Old Country to ensure getting the best.

Send to-day for our **DIRECT TO FARMER** proposition. We have something good to offer you, for we are headquarters for Steel Tanks and Troughs. Address, Dept. 8.

Steel Trough & Machine Co., Limited :: Tweed, Ont.

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Get Five Cents More a Bushel FOR ALL GRAIN YOU SELL.



This is the Machine that will do it. Test it FREE this Fall.

Handles 800 Bushels a Day Easily. Cleans and Grades All Grain Perfectly. Has Seventeen Screens. Saves Its Cost Twice a Year--- At Planting Time, At Selling Time. It is Positively Guaranteed to You.

THE Chatham Mill is built staunch and strong, with nothing about it to get out of order even under hard and steady usage. It is actually the most modern of all such machines, and is designed to run easily while doing its work perfectly. No other machine of the kind runs anywhere near so EASY as The Chatham Mill, because of an ingenious multiplying gear that gives high speed with easy turning. A thousand bushels of grain perfectly cleaned, perfectly graded, is only an ordinary day's work for the Chatham; and this has been exceeded by many users. Fitted with seventeen screens and riddles, of various meshes, of specially galvanized wire of our own production, this Mill handles ANY grain, from millet or flax to Indian corn. It not only cleans, remember,—it grades; takes out the shrunken, immature, imperfect grains as well as the weed seeds, and keeps them separate.

CLEAN and grade your grain with the Chatham Mill before you market it. Specially designed and built for the farmers of Canada, and any buyer will pay you a higher price for every bushel of it. Grain-buyers know that grain run through this Chatham Mill is clean grain, free from ALL dirt, free from ALL weed-seeds, free from ALL cockle, and absolutely free from oats, wild or tame.

You Cannot Farm Right Without My Mill

GRAIN-BUYERS know, as thousands of farmers throughout the land know, that the CHATHAM alone can be positively relied upon to separate oats from wheat. And the Chatham not only cleans the grain right, but grades it accurately. Hundreds of your neighbors use this Mill, both before planting and at selling-time, simply because it pays so well to use it. **TEST IT FOR YOURSELF. TAKE THE MILL ON THIRTY DAYS' FREE TRIAL.** Test it at our risk, upon our binding guarantee that it will clean, grade and separate any grain, large or small, faster and better than any other machine on earth.

Try It a Month for Nothing Take Two Years to Pay for It In

SEND NOW for this Chatham Mill—is not merely a fanning mill alone, but a combined separator, grader and fanning mill. Write for one to the shipping place nearest your home. The Mills are carried in stock at all my warehouses, ready for immediate shipment on shortest notice. Get one quick. Test it thoroughly in any way that seems to you fair. Then, when it makes good with you, pay for it in two years' time—it will have paid for itself long before that, over and over again. Take it, test it, and let it prove to you that

It Runs Easiest and fastest

WE build special fanning mills for every farming region on earth; and this is the mill built specially for the Ontario farmers' varied needs. It is the one machine that perfectly cleans, grades and separates—it is guaranteed to do that to your entire satisfaction. The proof that it WILL satisfy you is put right in your own hands by the Thirty-Day Free Trial we offer you. That trial will prove positively why and how this Mill adds fully five cents a bushel to the value of any grain you sell, and ten or more cents a bushel to the value of seed grain.

CHATHAM FANNING MILL Grader and Separator

Manson Campbell says: I have been building these Mills for 40 years—since 1867; and I KNOW HOW. I am THE specialist in this grain-cleaning proposition; and you can take my personal word for it that this

Mill will do every single thing said for it in this advertisement. You cannot get the same value for your money in any other machine. You cannot buy a Mill that does so much so well. Test it for yourself and see.



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