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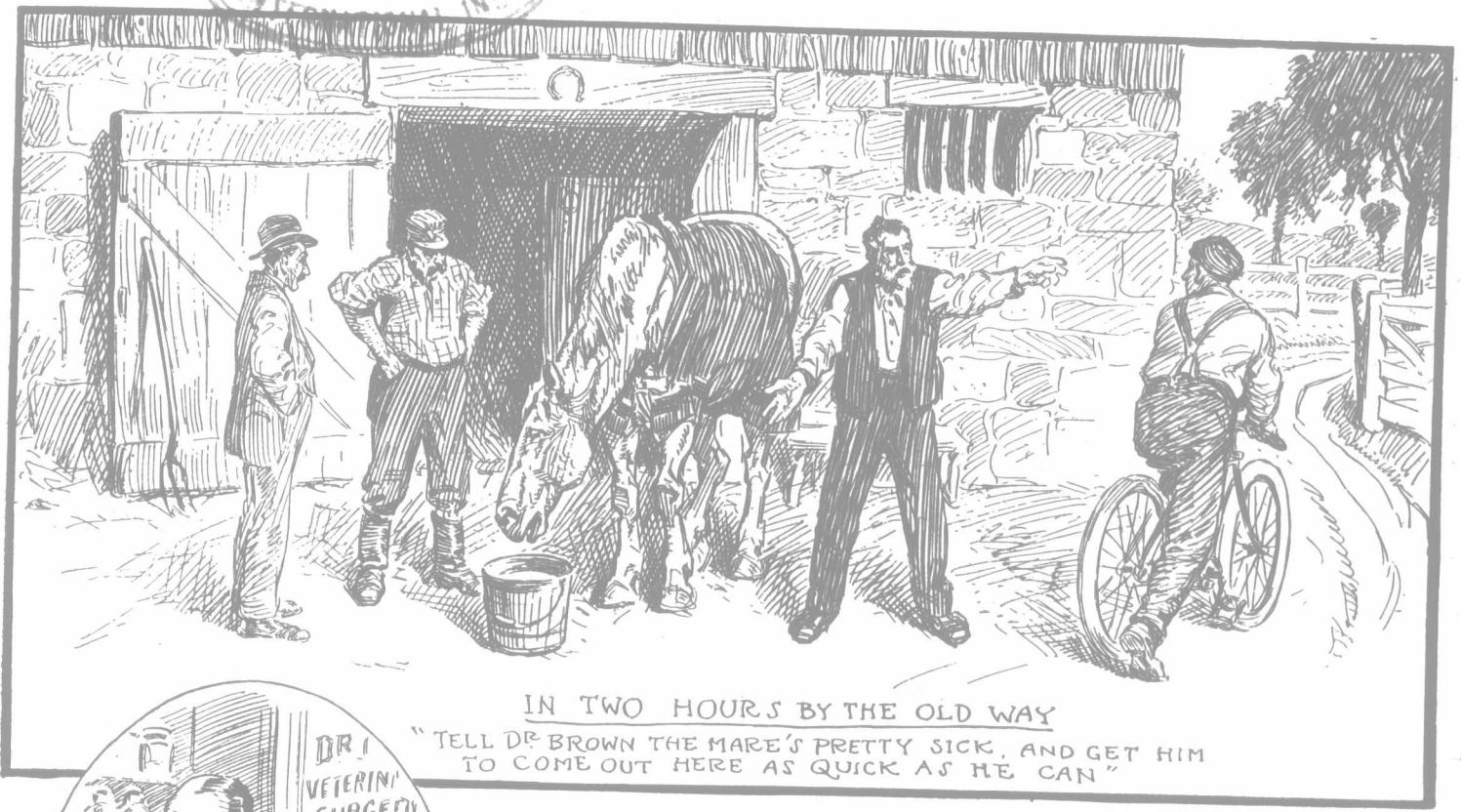
* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.*

VOL XLVII.

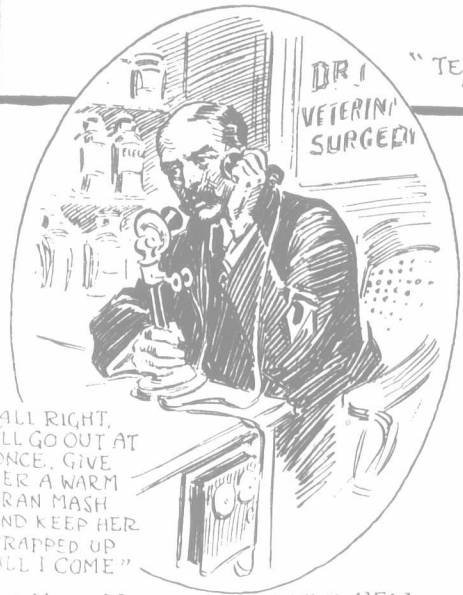


LONDON, ONTARIO, AUGUST 22, 1912.

No. 1039



IN TWO HOURS BY THE OLD WAY
"TELL DR. BROWN THE MARE'S PRETTY SICK, AND GET HIM TO COME OUT HERE AS QUICK AS HE CAN"



"ALL RIGHT, I'LL GO OUT AT ONCE. GIVE HER A WARM BRAN MASH AND KEEP HER WRAPPED UP TILL I COME"

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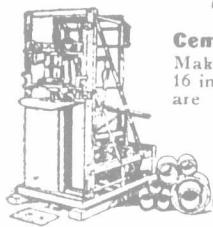
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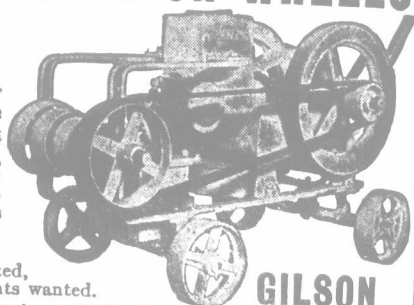
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Ararat, Ont., June 7, 1912.

We received in fine shape the young apple trees you so kindly sent to the farm here. Sir William asked to say how grateful he was for your kindness and courtesy in the dealings he has had with you, and I overheard himself saying ever so many pleasant things about you. For myself, if you will kindly allow me to say so, I have always maintained that there is a special character in every thing sent out from your Nurseries, from a strawberry to an order of several thousand apple trees. Thinking I am again most sincerely for your kindness, I am, dear sir,

(Signed) J. G. DAVIDSON.

June, 1912.

I bought 100 trees from your agent, Mr. Gideon Anderson, in the year 1909, gave them a good chance, and in the fall of 1910 some of these trees had apples on them. These apples were shown at Picton Fair and received second prize. Had they been a little more uniform in size they would have commanded first prize. People who saw the stock in my field were so well pleased that three brothers-in-law of mine, living in other parts of the country, told your agent they would be pleased to give orders. Powers, Kerr and Abner Vandusen each gave orders. The former for 20 and the latter 200 for himself and parents. Your good stock made the sales to these men. It can be easily seen that it pays to buy Mr. E. D. Smith's stock. The trees come so early in the spring they have all the spring rains to help them get a good start.

(Signed) RICHARD JENKINS,
South Bay, Ont.

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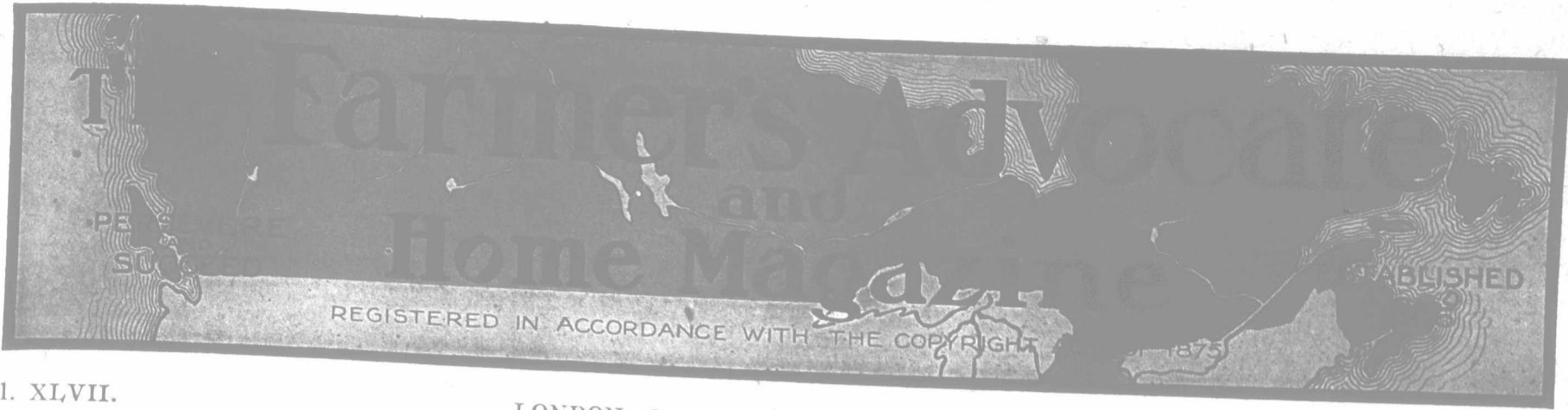
BULLETIN 33

Learn "How to get rid of hen lice with one application of Avenarius Carbolinum a year." How to paint siles, barns, fences, shingles, etc., to preserve against decay. "Country Gentleman" says: "Every reader should have it." Tested on Dominion Farms; highly recommended by Mr. Gilbert, poultry manager. Canadian orders filled from Montreal stock. Write to-day.

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Vol. XLVII.

LONDON, ONTARIO, AUGUST 22, 1912.

No. 1039

EDITORIAL.

Eastern Canada needs and merits advertising, both provincial and local.

With the cool, moist weather of late July and early August, oats should fill almost as well as they do in the Old Country.

A good many patches of timothy have been left for seed this year. Nine-dollar timothy seed gave us all kind of a wrench last spring. We would rather sell than buy much at that price.

Live stock is essential to a true rotation of crops, and a true rotation of crops is essential on a mixed farm, and, the owning and operating of a first-class mixed farm should be the aim of the majority of the rural population.

Do not pasture new seeded alfalfa and never pasture any alfalfa close in the autumn unless you wish to kill it. One of the best helps towards carrying a new stand through the winter is a good growth covering the ground when freezing weather comes in the fall.

A top price of \$10.40 per cwt. for corn-fed beef on the hoof in Chicago, early last week, with ten dollars for distillery cattle and nine for range steers, is the cheering report for feeders with fat cattle on hand. Following a top price of \$10.25 the previous week, these figures spell "beef scarcity" in capital letters.

A flock of fifty sparrows requires daily the equivalent of a quart of wheat, says Ned Dearborn, of the United States Biological Survey. Mr. Dearborn recommends trapping and using them as food, keeping them alive in outdoor cages until wanted for the table. It is unprofitable, however, to keep them long, as the quantity of grain or other food required daily amounts to half their own weight.

"Corn can't beat half a crop," is the way one correspondent phrases a pretty general situation. Barring the chance of a most extraordinary late summer and fall, much of the corn is bound to be immature, as well as thin and short. The man with the silo is fortunate in being able, at least, to make the most of a scanty crop.

"I look upon wheat as the backbone of Canadian prosperity," says A. W. Smithers, Chairman of the Grand Trunk Railway Company. Possibly, but, with a little less attention to wheat and a little more to live stock, the prosperity of the West would be placed on a more solid footing, Western soil would be more fertile, Western fields cleaner, and Eastern agriculture less acutely discommoded by the annual Macedonian cry for help.

It is always stimulating and instructive to know what other men are doing in one's own line, whether it be far or near. It is specially helpful to a man with stable judgment, considerable personal experience and a thorough grasp of scientific principles. Lacking these means of ballast, he may be unduly carried away for a time by newfound enthusiasm and ill-considered ideas. Breadth of information confers opportunity, but the use of the opportunity depends upon the man. We need to keep our thought digesters working full time.

The Problem of Rural Finance.

In the opinion of David Lupin, the wealthy American, who was instrumental in founding the International Institute of Agriculture, and also in the judgment of the Southern States Commercial Congress, held at Nashville, Tenn., in May, problems of rural finance lie at the basis of every attempt to improve United States rural conditions. Only through the possibilities of credit, freely obtainable, declares the Congress, can the latent wealth of the farmer, based on his character and assets, become active wealth. The question, primarily, is not so much one of "cheap money" as of money in its most effective form, money not only for the use of individual farmers, but for the use of co-operative groups of farmers. It is believed by many that in the rural co-operative credit systems of Europe there are principles and plans adapted to the needs of American farmers, and at the Congress in question it was decided to thoroughly investigate the Raiffeisen, Schultze-Delitzsch and German Landschaften systems. Some idea of their significance may be gathered from the fact that the three systems named in a year do a total business of over \$5,000,000,000; and, further, that the corporations or trusts so numerous controlling farm products in America are said practically to be unknown in Europe. The keen struggle for subsistence and the great cost of government, largely as a result of militarism, have impelled the farmer there to force a settlement of these problems, and emancipated him from the claws of corporations through the agency of co-operative banking. The decision of the Congress will result in a large, special committee, representing every State in the Union going to Europe at the time of the next International Institute meeting at Rome, Italy, in May, 1913, to master the rural co-operative credit systems, as used by European farmers, and determine to what extent they may be adapted to conditions in America.

"Syndicalism."

The "man in the street" who has sufficiently overcome his horror of socialism to distinguish it clearly from anarchy, has a new thrill coming to him in the form of "syndicalism," a French invention, whose name is derived from "syndicat," the French term for a trade union. Literally it means unionism, but as pointed out by an article in the English Review, and quoted in the Review of Reviews, it has become the term for a revolutionary economic movement which contends that social revolution must come through the direct action of the labor unions. Socialists and Syndicalists alike look forward to the abolition of the present capitalist system, which involves private control of land and other means of production, but while Socialists seek to bring the change about by political action through parliamentary measures accumulating reforms, Syndicalists believe the best and simplest way of creating a new social order is by the various organizations preparing for taking over their industries, and carrying them on for the benefit of what they are now calling the collectivity. As the greatest practical experiment in Syndicalism the article cites the Industrial Union of the Bottle Blowers, of Italy, where a factory was started by the Union to employ certain striking comrades, and from this has gone forward adding one plant after another until at present the co-operative factories employ 2,500 out of the 3,500 members

of the Union. Every member of the Union is said to be a shareholder, even those working in the factories of the Trust. Even agriculture threatens to be directly affected by the new movement, for we read that 200,000 acres of land in Italy have passed into the hands of the farm laborers organized into Unions and Co-operative Societies.

The Syndicalists' plans are so far-reaching and involve such momentous social changes, that society as a whole is affected. It has therefore been asked, "What does Syndicalism offer to those classes of society not engaged in manual labor?" The Syndicalists have solved the question by extending the meaning of labor so as to include all productive work. Teachers, doctors, artists, clerks, and the like have been organized into syndicates and have joined the army of organized workers. The Syndicalists propose to organize in the same way all those who do some useful work for society, or, as they express it, "syndicalize" society. Their idea is to transform society into a federation of self-governing productive groups working together for the benefit of all with instruments belonging to society as a whole and under the supreme control of the community.

What defects of practice the future may reveal remains of course to be seen, but as a phase of co-operative effort the movement is at least worth watching.

Progress of Agricultural High Schools.

Agricultural high schools are steadily coming to the front in the United States. As distinguished from State colleges of agriculture, such schools are now maintained in at least seventeen States. They vary greatly in work, equipment, income and size of district served, but have one point in common, as differing from public high schools which simply maintain courses in agriculture, viz.: that while the latter offer general in college preparatory secondary courses, the special agricultural high schools confine their work to technical courses in agriculture, mechanics and home economics, supplemented by such work in mathematics, English, and the natural sciences, as are needed to round out the technical work with a fairly good vocational course for young men and women who do not intend to pursue a college course. The territory served by these schools vary from a single county to areas covering one-third, one-half or a whole state. Maryland, Michigan, Mississippi, North Carolina, North Dakota and Wisconsin have adopted the county unit; Alabama and Georgia, the congressional district; Oklahoma the supreme court judicial district; while California, Colorado, Massachusetts, Minnesota, Nebraska, New York, Pennsylvania, and Vermont have large indeterminate areas.

Wisconsin was the first State to establish county agricultural schools. In 1911 that state had five such schools in operation, Maryland 2, Michigan 2, Mississippi 23 and North Carolina 4. Alabama was the first to have a complete system of congressional district agricultural schools, 9 in number; Georgia has 11; Oklahoma has 5 judicial district agricultural schools and one special district school. California has 2, Colorado 2, Minnesota 2, New York 3, and Massachusetts, Nebraska, Pennsylvania and Vermont one each. The annual cost of these schools for maintenance alone is about three quarters of a

THE FARMERS 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.

1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. It is impartial and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and homemakers, of any publication in Canada.
 2. TERMS OF SUBSCRIPTION.—In Canada, England, Ireland, Scotland, Newfoundland and New Zealand, \$1.50 per year, in advance; \$2.00 per year when not paid in advance. United States, \$2.50 per year; all other countries 12s.; in advance.
 3. ADVERTISING RATES.—Single insertion, 25 cents per line, agate. Contract rates furnished on application.
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 12. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve "The Farmer's Advocate and Home Magazine," Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
 13. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.
- Address—THE FARMER'S ADVOCATE, or
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LONDON, CANADA.

million dollars. In the Arkansas agricultural school legislation it is provided, after the building and temporary work, that all work in and about said schools, including farming and care of stock shall be done by the students. Each school is controlled by a board of five trustees "who shall be intelligent farmers," appointed by the government of the state for ten years. Students must be at least fifteen years old. With the inauguration of these schools Arkansas has in operation a definite system of agricultural education, beginning with the common schools and extending through a four years college course. From an account of these schools, written in bulletin No. 250 by C. H. Lane, assistant in agricultural education office of experiment stations, U. S. Dept. of Agriculture, they appear to be conducted in commodious and handsomely equipped buildings, connected with farms conducted to suit the needs of the institutions and the farming country from which the students come. There are dormitories for boys and girls. In the Russellville school the plan is to provide an acre plot for each student to be responsible therefor. The tuition is free, but there is a charge for actual cost of board. The Magnolia school opened early in 1911 with a dormitory capacity for seventy-five students which soon proved inadequate, and a new dormitory with accommodation for 128 students has been provided. The four main buildings cost \$45,800 besides cottages for the teachers. Magnolia gave a \$50,000 bonus and four-hundred acres of land towards the school—nothing stingy about Magnolia which is to be one of the finest home towns in south western Arkansas! The fourth District School at Monticello is a fine, well conducted institution, with an enrollment of 201 regular students and 50 short course students whom the photogravures show to be an enthusiastic and enlightened class of young men and women. It is safe to conjecture that the boys and girls of Arkansas will grow up with a pride

for agriculture and home life, and will not be swarming off to the cities to toil in sweated factories, stand behind counters or drag in an existence and street car conductors.

HORSES.

Keep a supply of oats in the colt's box, and watch him grow.

Care should be exercised in feeding oil meal to horses, as it has a laxative effect, and may, if fed in too large quantities, cause scouring. This should be borne in mind by fitters who are preparing for the fall shows.

We are inclined to think as Henry, who, in his "Feeds and Feeding," says: "A healthy horse needs nothing but good food, pure air, plenty of exercise, with due attention to cleanliness, and regularity in feeding and watering; and when all these things are attended to properly, the drugs and nostrums that stable lore prescribes as 'good for horse' would be better thrown to the dogs."

Quids of grass, finely chewed and rolled together, and found lying about in the horse pasture, are the result of trouble with the teeth. No horse should be permitted to go until his teeth have become so uneven. Horse-owners should make it a practice to have the teeth of all their horses about which there is any question, examined and cared for by a capable person.

Do not jam the horse's manger full of hay at noon. He does not require a heavy roughage ration at this feed, and if hay is left in the manger until night, and not removed, it serves to "stale" the entire evening feed. How would you like to finish your noon meal at night, and off the same plate, unwashed? The horse is sensitive about his diet. The greater part of the hay should be fed at night, but even then, more than is eaten up clean before morning should not be given.

Alfalfa for Horses.

Much is said about alfalfa for dairy cows, young cattle, hogs and sheep, but few have regarded it seriously as a horse feed. There is no doubt but that well-cured alfalfa makes one of the best hays for winter feeding of farm horses. A recent issue of Wallace's Farmer contains the following, taken from an Illinois Farmers' Institute circular:

"In Western Kansas, farm horses have been wintered on a daily ration of ten pounds of alfalfa hay and some stover, and thin horses fattened on alfalfa hay and a little corn. It has been found that horses do not need a heavy ration of alfalfa hay. Fed with grain, probably 10 or 15 pounds of it is equal to a mangerful of other hay. Alfalfa has a nutritive ratio of one to four. An ordinary 1,000-pound horse, if given all he will eat of it, will eat from thirty to forty pounds in twenty-four hours. The alfalfa contains about 11 per cent. of easily-digested protein, and the horse will take into his system nearly four and one-half pounds of protein, whereas about two and one-half pounds of digestible protein is all that an ordinary horse of 1,000 pounds weight, when at work, can utilize. If a horse is allowed to eat such quantities, half of it is wasted; moreover, it is likely to injure him by making him soft and easily sweated when suddenly put to work.

"It has been rumored that feeding alfalfa to horses produces kidney trouble. The foundation for this rumor is the fact that, when alfalfa is fed to a horse the first time, it does stimulate his kidneys so that there is a noticeable increase in the amount of urine voided, but the symptoms disappear in a short time. If alfalfa is fed in moderation, it is not likely it will ever so affect him.

"A prominent horse-owner says that before alfalfa came into use on his farm there were nearly always one or more horses with heaves, but since alfalfa has been used, not one case of this disease has developed, and that colic in his horses is a rare thing, and would probably never occur again if the men did not occasionally feed injudiciously of corn, or overfeed with alfalfa hay. Alfalfa leaves and stems are free from the small hairs that cover red clover leaves and stems, and which catch dust and irritate the bronchial passages of the horse; this is one reason that alfalfa is better than clover for horses."

The Horse Not Losing Ground.

"The Horse Must Go," is an expression which we often hear fall from the lips of some admirer of the auto truck, as he watches it, laden with its tons of merchandise, rolling steadily over the smooth city pavement. The increasing number of horseless carriages for pleasure, for speed, and for carrying heavy loads, leads one to stop and weigh the matter carefully. Must the horse go? Can the auto truck, the great tractor, the ingenuity of man in inventing and constructing machines, vehicles and implements operated by power manufactured within themselves, drive the horse into oblivion? Joseph Montgomery, Secretary of the Minnesota Stallion Registration Board, claims not. True, horseless carriages and trucks are increasing in numbers, but, as Mr. Montgomery says, never in the history of the draft horse has the future appeared so promising to breeders as at present. There is no reason, in the light of statistics, why the doom of the draft horse should be spelled by the auto.

Though the enormous number of auto trucks in the cities might lead one to believe that they were crowding the draft horse out of business, actual figures presented by Mr. Montgomery do not prove it. In Minnesota State alone, the number of sires used for horse-breeding increased from 3,544, on May 1st, 1910, to 4,445 on May 1st, 1912; and during the same time the number of registered draft sires increased in the State 35 per cent.

Never in the history of Chicago and St. Louis markets, the two largest horse exchanges in the United States, has the demand been so keen or the prices so high for high-class horses of all types. Statistics from the United States Bureau of Animal Industry show that the number of horses in that country has increased from 13,500,000 to 21,500,000 in the past decade. The average value of all horses in the United States has increased from \$45 to \$115 in the same period. This has occurred, despite the increase in the use of automobiles.

First-class draft horses have been almost prohibitive in price this year, because of the great demand for them, and a team of drafters has often sold as high as \$800 to \$1,000. The demand for high-class saddle and carriage horses in the Eastern cities has been so great that their prices have been almost prohibitive to many who operate automobiles.

All this should be very encouraging to horse-breeders both in the United States and Canada. This is a fair estimate of conditions in both countries, and when horses have increased at so rapid a rate the last two years, and prices have kept soaring, in spite of the increase, there is no reason to believe that the automobile will ever drive them out of business. Instead of the automobile causing a scarcity of horses, it would be more reasonable to say that the scarcity of horses has caused the temporary advent of the automobile and auto truck.

Farmers and horse-breeder in Canada, as well as in the United States, need not fear to produce more horses. If they are large, sound and serviceable, they will always demand the highest prices. The horse industry is founded on a permanent basis, and has no reason to conflict with the automobile industry in any way.

The Sure Breeder for Profit.

What horse-breeder is there but has had trouble with mares failing to breed? It is a common complaint in all districts. The Live-stock Journal, commenting upon the fact, says:

"Annually there arises the complaint that mares fail to breed. Mare owners and those who have some stallions alike share the exasperation and loss resulting, and blame weather, work and each other for the unfortunate results. Each of these factors exerts its influence at times, but the fact that on some farms some mares breed regularly, and almost as surely deliver strong foals and raise them, is evidence enough that unfavorable environment and imperfect care are not disastrous to all mares. Farmers do not select brood mares rigidly enough. So long as the mares are kept mainly for their work, and are merely bred on the chance of producing a foal, results will continue to be unsatisfactory. In France, brood mares are worked as a matter of economic necessity, but they are selected for breeding capacity. Mares that are not producers are sold. Probably this plan eliminates some mares through no faults of their own, but it makes sure work of catching the counterfeits and stopping their losses. The most profit from horse-breeding is derived from mares that will raise colts and at the same time do the farm work. If a mare fails as a breeder, she should be sent from that branch of the business before she perpetuates her failings through chance descendants. It is the sure breeder that pays, and it is the daughter of the sure breeder that is most likely to be a profitable producer."

Shoeing the Colt.

The crisis in a colt's foot, says Harold Leeney, M. R. C. V. S., in the Live-stock Journal, is the first visit to the smithy. All the circumstances are usually unfavorable. The youngster has seldom been handled, perhaps never, if a filly, and, after much shouting and rough usage, is brought to the shoeing shop, already alarmed before the smith blows up the fire or attempts to lift a foot that should have been many times so raised by others. Only the phlegmatic get through this ordeal without a painful recollection and a dread of the forge, which in a few instances never passes away. No subsequent kindness and gentleness can ever overcome the fear of a colt that has been hit over the head with a rasp for the offence of not knowing what was wanted of him. Some very good-looking horses change hands for no other reason than that they cannot be shod without casting or trammelling in a travis, and this is no small objection to a horse requiring to be shod or, at least, have shoes removed or nailed every two or three weeks. The first shoes should be plain stamped ones, and not thick, and no portion of hoof should be taken away that is not done so in order to seat the shoe. If owners would not try to economize in shoes, they would save much in horseflesh, which is dearer than iron. The colt should get accustomed to a shoe which does not extend one fraction beyond the crust, but slightly within it, and he will be less likely to brush or cut or trample off one shoe with the other. The first set should not be for business, but for education, and then the wear will tell the smith how best to use him for breaking or real work. On no account should frog or sole be cut away. The health of the foot cannot be maintained in full functional activity if, by the rim of iron we call a shoe, we lift all other parts of the plantar surface out of action. If the two-year-old is merely shod for breaking in, then, when his lesson has been learned, he should have the shoes removed, if he is to be turned out again. The agricultural horse generally wears out his first set of shoes, as most breeders demand some service from the two-year-old, which they hold is favorable to development, or they prescribe it because the youngster must contribute something towards his maintenance if he is to pay his way; but the rule of removal of shoes and turning out again may well apply to light horses, whose tissues prove so much more capable of standing work, if not put to it too early.

The best hoof-dressing is water. The hoof should be constantly taking up and parting with water, if it is to retain its tough as well as elastic qualities. Ointments, tar, oil or grease are not necessary to keep healthy feet healthy, but greasy dressings help to keep in moisture of hoofs that have been poulticed and swabbed to give expansion.

Feet should grow during the entire life of the animal. On low-lying pastures and in moist seasons they may easily grow too much, and we should not fear to shorten a toe because we have seen or read of the evils of too much interference and of disastrous effects of cutting out the sole and bars and trimming away the frog, all of which structures should take their proper place in bearing or sustaining the weight of the body, if they are to remain functionally active and take their part during the entire life of the horse. The toe is thickest, and grows most, and all broken or turned-back crust on the foot of the unshod colt should be removed, and the rasp used to form a round edge which will not break again for some time.

Be Careful in Purchasing Collars.

Sore shoulders are a source of annoyance in many farm stables, as well as in the stables of transportation companies, liverys, and all places where horses are kept for heavy work. Nothing could be more painful to the horse than a constant drawing upon a raw surface in an ill-fitting or neglected collar, and nothing is surer to pull the animal down in flesh than this trouble. O. M. Olson, of Minnesota Agricultural College, in discussing the subject, says:

"If indifferent and careless drivers were compelled to endure a fractional part of the suffering borne by horses with sore shoulders, it is certain that much better care would be taken of the horses of the country. It is certain that a man would pull few loads if he had a pair of sore shoulders.

"In nearly every instance the sore shoulders of the work horse can be traced to an improperly-

fitted collar or hame, or, still worse, to poor care of the collar, which may fit the horse. The collar worn by the horse should have a bearing surface that is smooth and pliable, and that fits the shape of the shoulder accurately. Over this collar the hame should be adjusted so as to properly locate the draft of the load. If, in addition, the collar and the shoulders of the horse are cared for, the chances of sore shoulders have been reduced to a minimum. Care should be observed in the use of sweat-pads. They should be used only when the horse loses flesh and the neck shrinks. In that case, another collar may be advisable.

"A collar, to fit accurately, should conform to the shape of the shoulder, and should be neither

Examining a Horse for Soundness.

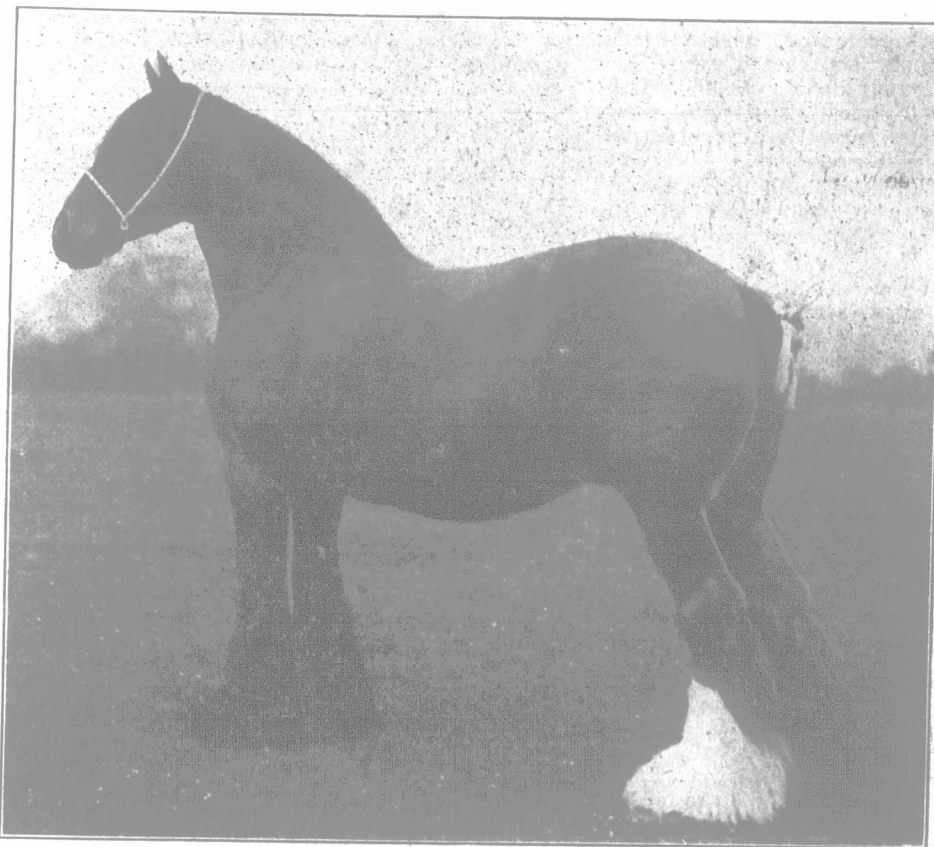
Horse-breeders, buyers and dealers all recognize the importance of soundness in horses, and also the importance of being able to detect unsoundnesses, no matter what means have been taken to obscure them. It is necessary to follow some system in going over a horse, to ascertain whether or not he is sound. Experienced horse-men follow a system almost unconsciously, but, to further bring this point before them, and for the benefit of those of our readers who may not have had much practice in selecting or judging horses, and who feel the lack of experience, or who are desirous of becoming better judges, we publish the following outline, by Professor

Charles Gresswell, M. R. C. V. S. L., of the San Francisco Veterinary College.

If possible, see the horse in the stable before the owner has a chance "to warm him up."

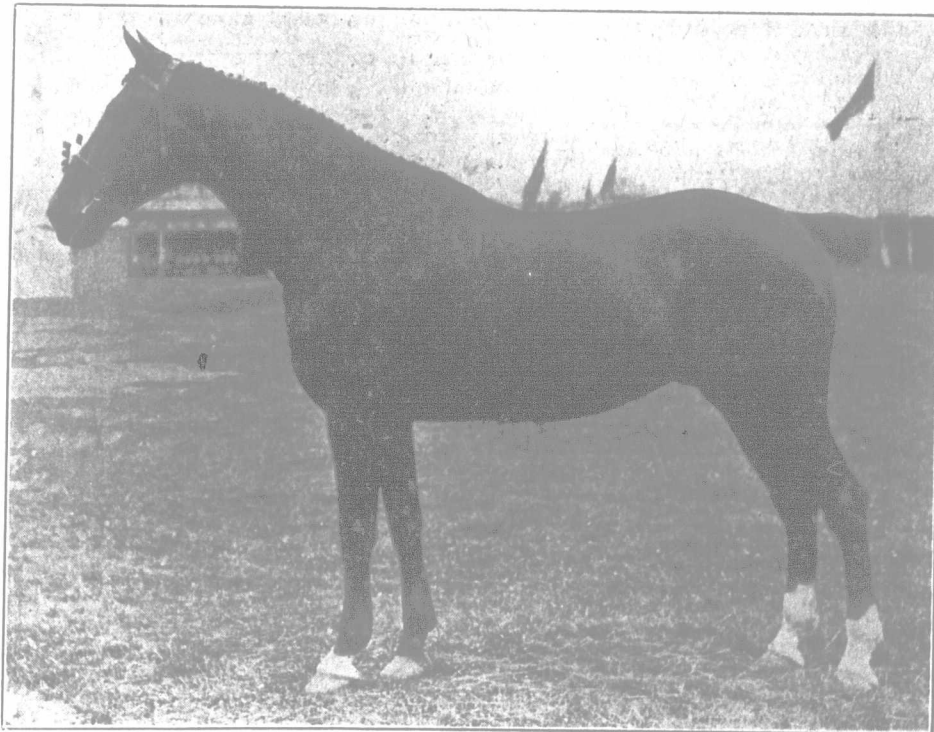
In the stable, look for evidence of "crib-biting," "wind-sucking" and "night-kicking." Watch the animal for signs of "weaving." Notice the character of the excreta, to see if the grain is properly masticated, if there are any worms or bots, or for signs of urinary sediment, etc. Notice if there are any extra appliances in use for handling the animal—throat straps, or hobbles, etc.—or, if the animal for any reason is stabled alone, away from other horses, examine the manger to see if the food is all cleaned up, or if there are evidences of his eating the bedding. Look around the stable for proofs of medical treatment.

Then have the horse bridled or brought to the stable door with the halter on. Notice if there is any trouble during this attention. Have the horse brought quietly to the door, allowing no bustling or excitement. At the stable door, examine the eyes carefully, using a black hat to cast the proper shadow over the eye. Look for any difference in the convexity of both eyes; examine the cornea for opacity or cloudiness, and the lens for cataract; notice the contraction of the pupils to determine the effect of light. Examine the eyes and breath for signs of opiates or other drugs. Listen to the heart. At this time give the horse a drink of water, and watch the process of drinking and swallowing. Have the horse then taken out of the stable into the open. Examine the nostrils for color, character of discharge, ulceration, abrasions, chancre and polypi. See that the orifice of the lachrymal duct is freely open. Examine the outside of the face for nasal gleet. Examine the ears for warts or any abnormal tenderness, and also for deafness. Examine the teeth and mouth, and smell the breath. Determine the age, and make note of this, and also at this time of any distinguishing marks and color, and sex of the animal. Examine the glands under the jaw and the glands in and around the throat, especially the parotid gland.



Pailton Sorais.

Shire mare; sold for 1,200 guineas. First and champion, Peterboro, Eng., 1912.



Beckingham Lady Grace.

Champion Hackney mare, Royal Show, 1912.

too large nor too small. The opening at the bottom of the collar between the collar and the neck should admit the flat of the hand, and no more. The collar should fit the sides of the neck without pinching. A new collar may be fitted the first time by soaking the face of it in water. It should never be used generally on any other horse.

"The draft of the tug should lie about one-third way up on the front of the collar, and, in every case, the hames should fit the collar when buckled snugly. The mane of the horse should not be permitted to work in under the collar, and accumulations of sweat on the collar should be removed carefully each morning. In the case of sore shoulders, the owner should always remember that an ounce of prevention is worth a pound of cure."

Examine the poll for poll evil.

Examine the neck for any signs of a strap having been used for wind-sucking; the jugular vein for evidence of having been bled. If this evidence exists, at once associate it with any other evidence which there may be of founder or of nervous or brain disease.

Examine the shoulders for fistula, sweeny and shoulder-joint concussion, or chronic sore shoulders from bad conformation.

Proceed down the fore legs and examine for any enlargement of the elbow joint or old scars denoting previous operation; the knees for enlargement or evidence of having fallen; the cannon bone for splints; the ligaments and tendons most carefully for any enlargements; the fetlock for sprain or bursal enlargements; the coronet for ringbone or sidebone; and then the foot for corns, quittor, founder sandcrack, quarter-crack, seedy-toe, canker, thrush, contracted feet and navicular disease. Compare the size and shape of the feet, and notice if shoes are of equal wear. Compare both fore limbs carefully for conformation, as well as for any enlargement.

Pass the hand over the back and loins to determine any irregularity in the bones of the spine, or for any signs of abnormal tenderness of the skin or muscles.

Then proceed to examine the hind quarters and limbs. Compare both hips, standing behind and passing the hand over the hip joints. Look out for drooping of the hip bone. Examine the tail and notice if there is anything abnormal. Frequently a shiver can be detected by suddenly forcing the tail upward.

Examine the anus for signs of worms; at the same time the genital organs.

Examine next the stifle joints, and compare one with the other.

The hocks must then be very carefully inspected for capped hock, curb, spavins of all kinds, thoroughpin, and for cracks or fissures of the skin in front of the joint.

Next examine the hind limbs for enlargements of ligaments or tendons, and the fetlock joints for bursal enlargements and thickening due to old sprain; the inside of the fetlock joints for what is commonly called brushing or interfering. Examine the pan of the heel for fissures, cracks and sores, constituting "scratches." Examine the feet for quittor, founder, thrush, sandcrack, quarter-crack, seedy toe, and canker. Compare inside of the hocks by standing in front and looking between the fore legs, and also by standing behind and by feeling with both hands on the off and on the near side. After this general manipulation, have the horse walked and trotted on level, soft and hard ground, and also, if possible, on uneven ground. Have this repeated until you are quite satisfied there is no lameness or imperfect action, such as stringout, etc. Back the horse, turn him sharply around to the left, and quickly back again to the right, in order to determine any chronic disease of spine or nervous system.

The next thing will be to have the horse saddled or harnessed, or put to drawing heavy loads, depending upon the character of the horse and the business for which he is intended. Examine under these conditions for action and lameness.

The next in order is to examine carefully for wind, by galloping or driving hard up hill, or by putting the animal to drawing a heavy load. In case of a young, unbroken horse, have him lunged by hand.

Examine for whistling, roaring or broken wind. Before doing this, it is as well to cause the animal to cough and make a pretense of striking the animal with a stick, in order to bring out the characteristic grunt or roaring, or the wheeze of broken wind.

After the examination of the wind, have the horse put back in the stable and remain perfectly quiet for fifteen to thirty minutes, if the patience of the owner will allow you that time. At any rate, allow the animal to get perfectly cool, and let it be brought out again and trotted up and down, both with the rider and without. Together with other evidence, this will generally settle the question of the presence or not of navicular disease, and it will also bring out latent lameness, in some cases of obscure bone spavin. It will, at the same time, test the permanency or not of cures of slight sprains. Take note of the general health and condition of the animal, and how it has stood the work given during the examination. If severe distress is noticed, coupled with an apparent high state of healthy conditions, look out for evidence of drugging, especially with strong alteratives, such as arsenic, very commonly used by unscrupulous dealers to produce an artificial appearance of good condition. After severe exercise, the evidence of arsenic will appear in a vivid red, and sometimes a blue, line along the gums, and also at times by severe diarrhoea, and abnormal thirst. The use of digitalis, in order to hide the incipient symptoms of broken wind, will be detected both before and after exertion, by an intermittent pulse. The use of cocaine, opium or morphine can be detected dur-

ing the examination by the abnormal, varying of the size of the pupil of the eye, and also occasionally by the breath after galloping.

The determinations as to whether any imperfection constitutes unsoundness must be governed by the purposes for which the animal is intended to be used.

LIVE STOCK.

The most important points in feeding whey to calves are regularity, cleanliness, and no variation in quantity.

A calf which is being pail-fed, or even one which is getting whole milk from his dam, will usually drink considerable water if given an opportunity.

Buttermilk has been found, by actual experiment, to be less conducive to scours in calves than is skim milk, and some English authorities recommend its use up to one part in ten in the feeding of whole milk to calves being rushed for veal.

Experiments carried on at Kilmarnock show the value of whey to be two-thirds that of separated milk for bacon production, when used alone. It gave much better results, however, when used with meal, and corn meal was found to be the best food to accompany whey.

In dairy districts a question often arises as to the relative value of skim milk and whey for pig-feeding. In three experiments at the West of Scotland Agricultural College, Glasgow, the relative values of separated milk and whey were found to be approximately as 3:2. That is to say, the skim milk was found worth fifty per cent. more than whey for pig-feeding.

To prove that young animals make the most economical gains, experiments at the Wisconsin Station were carried on for some time, and the results showed a shoat weighing about 50 pounds, which was gaining about a pound per day, to be using only 18 per cent. of his food for work in the body (digestion, etc.), the remaining 82 per cent. going as increase in body weight. A 200-pound pig was found to require just 36 per cent. of his food to maintain his body, only 64 per cent. being left as bodily gain.

The exhibitor will do well to take success and defeat alike. The Shepherd's Journal gives some advice which every live-stock showman should consider carefully, when it says: "Don't be too hasty in condemning a judge because he does not happen to place the awards just the way you think they should be placed, for remember, experienced breeders and fanciers often disagree as to the relative merit of two animals that are nearly equal in quality, yet a judge is expected to 'make no mistakes' in placing his awards. The liability of a dozen fanciers to differ as to which is the better animal, is no excuse for the judge, should he make any mistake. He is expected by a certain class to be 'infallible,' when the fact is that he is human, the same as other men, and may make mistakes. A judge must be of a philosophical turn of mind, in order to meet the many conditions and phases of character found among exhibitors."

Value of Silage.

Silage keeps young stock thrifty and growing all winter.

It produces fat beef more cheaply than does dry feed.

It enables cows to produce milk and butter more economically.

Silage is more conveniently handled than dry fodder.

Waste of corn stalks is prevented, saving one-third the food value of the entire crop.

When silage is fed, the corn stalks do not bother in the manure.

Feed that would not otherwise be eaten will be made palatable by the silo.

A large number of animals may be maintained on a given number of acres.

It enables the farmer to preserve food which matures at a rainy time of the year, when drying would be almost impossible.

It is the most economical method of supplementing the stock during the hot, dry periods in summer, when the pasture is short.—(Missouri Farmers' Bulletin.

Make Use of Farm Roughage.

Roughage is one of the most valuable assets of the farm when it is properly utilized. The average farmer does not value it at anything like its true worth, and so is often easily induced to sell much of it to the disadvantage of himself and his land in the future. A recent bulletin, published by the Indiana Experiment Station, says, one of the greatest losses of the farm is due to the lack of proper utilization of roughage incidental to grain production.

There are produced upon the farm large quantities of rough feeds that do not bring, on the market, prices to justify the removal of such quantities of plant food as of necessity accompanies the sale of such products. Therefore, one of the greatest problems to be solved in successful farm management is the disposal of the roughage produced on the farm in such a way as to secure the feeding value, and at the same time conserve the plant food therein contained. It is impossible to produce grain without also producing large amounts of roughage. Since cattle are pre-eminently the most satisfactory animals to consume large quantities of roughage, the solution of the roughage problem lies largely with this class of stock, and with it rests the real value of the roughage grown on the farm. Cattle-feeding is coming more and more to be considered as a means of marketing grain, conserving soil fertility, and completely utilizing the roughage produced on the farm, rather than a means of commercial speculation.

The use and value of clover hay is pretty well recognized and understood, but the use and value of the cornstalk is neither understood nor appreciated. It has long been known that the stalks contain a very large percentage of the food nutrients of the corn plant. When harvested to preserve the grain only, the stalks, either standing or as corn stover, while containing the food nutrients, have them locked in such a way with woody fibre that they are not readily available for animals. The woody parts are not only unpalatable, but when eaten, require so much energy in digestion that a large part of their value is lost. When harvested, by putting the entire plant into the silo, the plant passes through a process of fermentation that leaves the hard parts of the stalk soft and palatable, and the general effect of summer grass is secured in winter by feeding the corn silage. When fed in the form of silage, the entire corn plant is consumed.

In the experiments at the Indiana Station, it was found that corn silage was a more economical and more profitable roughage than clover hay alone for fattening cattle. Addition of silage to a ration of shelled corn, cottonseed meal and clover hay decreased the consumption of shelled corn in amounts closely approximating the grain content of the silage in the ration. Addition of silage to a ration of shelled corn, cottonseed meal and clover hay increased the rate and decreased the cost of gain, and finished the cattle equally well. Silage added to a ration of shelled corn, cottonseed meal and clover hay increased the profits per steer in amounts closely corresponding to the saving in cost of gains.

The substitution of corn silage for clover hay with grain rations of corn and cottonseed meal did not affect the rate of gain, but did greatly reduce the cost of gain. Corn silage alone as a roughage, with a grain ration of shelled corn and cottonseed meal, gave slightly less finish than clover hay alone as a roughage, but the cost of gains was enough less to return a much larger profit where silage was the only roughage fed. The more nearly corn silage replaced the clover hay in the ration, the cheaper the gain, but the entire elimination of clover hay from the ration was accompanied by slightly less finish on the cattle.

Under prevailing market conditions, the larger the proportion of corn silage in the roughage, in the early part of the fattening period, the cheaper were the gains. To induce sufficient grain consumption to insure satisfactory gains, it was necessary to limit the amount of silage fed during the latter part of the feeding period. Corn silage in the ration produced relatively more rapid improvement in the condition of the cattle during the early part of the fattening period than did clover hay alone as roughage. The consumption of frozen silage scoured the cattle.

The results in general "indicate very strongly that the more nearly the clover hay is replaced by corn silage, the greater is the reduction in the cost of making gains, but that, for the latter half of the feeding period, the roughage must be limited to such amounts that enough grain will be eaten to return satisfactory gains. Otherwise,

there will be a lack of finish on the cattle that will partially or entirely overcome the advantage derived from the more economical gains."

With these precautions, it appears that the substitution of silage in part for clover is an economical method of utilizing roughage on the farm.

Benefits of Live Stock.

The benefits of growing live stock, according to a writer in "The Farmer's Advocate and Home Journal," Winnipeg, Man., are:

(1) Furnishing food for the home, as in the case of fowls, sheep, hogs, dairy cows and live cattle; (2) furnishing substantial revenue, as food fed through animals kept on the farm will bring larger returns than when the same is marketed directly, including food that is fed to horses, as well as to the classes of animals which provide food for man; (3) aiding in destroying weeds, as when sheep are numerous kept; and (4) maintaining fertility in the land as a result of returning to the soil in the manure the larger portion of what was taken from it, in the food which grew upon it, and which was fed to live stock. Where live stock is judiciously maintained the farmer will grow all his meat product for the needs of his home on his own farm. This will effect a very great saving in the maintenance cost of the household. It shows a short-sighted policy when the man on the farm does not grow all the meat that is wanted to meet the needs of his house. The high prices that are now being paid for meat and dairy products make it sure to the farmer, that, with the exception of wheat and flax, he will make more money from the foods grown by feeding them judiciously to live stock than from selling them directly. Some of these products are virtually unsalable on the open market. Such are straw and screenings, and yet their value for feeding is very considerable. When sheep are maintained, the service which they render in destroying weeds will more than offset, in many instances, the cost of keeping them. The value of the manure resulting as a factor in the production of grain cannot be easily over-estimated.

Losses During Transportation.

Cattle lose in weight on their way to the slaughter-house. This loss should be calculated as exactly as possible by the owner, so that on consulting the quotations of the slaughter-houses he may be able to ascertain the real worth of his cattle.

Messrs. Herter and Wilsdorf asked the exhibitors in the 35th Berlin Cattle Show to give them the exact weights of the animals before they were sent to Berlin. On their being again weighed when they arrived, it was found that 25 calves had lost on an average 5.16 per cent., and 238 full-grown animals 5.47 per cent.

At the 36th Berlin Cattle Show, 1910, more exact details were obtained.

The losses in weight on the journey showed great individual differences, and did not appear to depend alone on the time involved.

Differences of age and sex, of biological and physiological condition, perhaps also of food, were doubtless the other determining factors.

The animals came from all parts of Germany.

The average results showed the railway mileage, which caused 2.2 pounds loss in weight in each animal to be, in calves up to 4½ months of age and weighing 3.33 cwt., 23.6 miles; bulls, 3½ years and upwards, 18.77 cwt., 3.47; cows, 14.34 cwt., 3.85; young bulls, 17.05 cwt., 3.10; young cows, 12.56 cwt., 5.40; steers 3½ years and upwards, 15.69 cwt., 4.28; heifers and steers under 3½ years of age, 11.68 cwt., 6.46; and steers from 2½ to 3½ years of age, 13.42 cwt., 3.6.

To Prevent Cattle Jumping.

Editor "The Farmer's Advocate":

To prevent a cattle beast from jumping, simply take old worn-out shoes off small horses, cut the heels off at the fourth nail-hole, and beat them out thin at the heel, and fit the circle of the cow's front feet. Take small No. 7 or No. 6 horse nails, cut off the points to proper length, and point again with a file. Dip in some grease, so they will drive easily, as a cow's hoof is very hard, and nail on the shoes, thus bending the cloven toes together, and you have them on the proper side of the fence, as the toes must spread to spring enough to jump. I cured one early this spring, and put them on another heifer recently. By being careful to get the nails well to the outside of the foot, and well turned out, there is no danger of pricking. Be careful in driving is the secret. After it is once done, it is easy to repeat.
R. CHURCH.
Leeds Co., Ont.

THE FARM.

Points in Growing Winter Wheat.

In a bulletin on winter wheat production, by Henry G. Bell, Agronomist of Ohio state, the following three means of increasing the yield of this crop, and meeting the needs of a rapidly increasing population are brought out, viz: The farmer must cultivate no more land than he can till thoroughly; there must be rotation of crops practiced, and there must be soil renovation by fertilizers. Both the physical condition of the soil and the plant food conditions can be greatly benefited by a judicious use of barnyard and green manures. However these sources of fertility must be supplemented with complete fertilizers, not only to supplement the ingredients which are supplied in insufficient quantity by manure, but to give the tiny wheat plant a vigorous start. Probably no cereal crop grown on the farm will show better results from fertilizers than will wheat.

Wheat does best in a medium to heavy loam soil. Since it is a moderately deep feeder, it is necessary that the soil should be worked fairly deeply. The soil should contain considerable organic matter, so that it will retain sufficient moisture to mature the crop. This organic matter, too, will modify the texture of the soil, so that the air will circulate within the root-growing area. For winter wheat, it is desirable to plow as soon as the preceding crop is taken off so that moisture will not be wasted by evaporation. If there is considerable growth of green crop turned under, it is desirable to roll and disk immediately after plowing, so as to compact it and assist in the rotting of the organic matter turned under. It is also good practice to drag or harrow the surface of the ground so that a mulch of about two inches depth may be maintained on the surface. This will prevent evaporation of soil moisture. If a legume crop, such as clover, cow-peas, beans, etc., has preceded the spring grown crop, the ground will be supplied with considerable nitrogen; but, if the preceding crop should have been early oats, barley, or other grain crops, considerable of this plant food will have been used up. This must be put back in order to get best results. Where it is difficult in late summer to obtain barnyard manure to enrich the wheat field, the farmer, to meet this need, should use a complete fertilizer.

A point of great importance in the wheat growing is the quality of seed. Every farmer will do well to pay a great deal of attention to the quality of the seed which he uses. He can obtain seed of a superior quality by fanning and grading his wheat. The large starchy berries are not best to use for seed, since continuous use of such seeds tends to soften the general quality of the variety. A large, plump, sound berry has given exceedingly better yields when compared with small, plump, shriveled or broken seed, in a long series of tests. A large amount of the success or failure of the crop of wheat depends upon the suitability of the soil, the preparation of the seed bed and the quality of the seed.

The question of how best to get the wheat seed into the soil has engaged the attention of a great many experts. When the land is prepared, it is the practice among many large wheat growers to sow the wheat with a drill. Various advantages are claimed for different types of this machine, but the general advantage in the use of a drill for this purpose is that the tiny seeds of

wheat are sown at an even depth and are carefully covered in the process of drilling. During a winter of severe weather, and a spring of alternate thawing and freezing, it has been noted that drilled wheat shows a greater percentage survival than broadcasted wheat. The reason for this is that the crown of the plant is buried sufficiently deep in the soil so that it has protection against unfavorable weather. Moreover, where the wheat was sown sufficiently early, the tiny rootlets have gotten firm hold on the seed-bed and are not so easily torn up as are those of unevenly sown broadcasted wheat.

Special care should be exercised in sowing winter wheat to avoid drilling it to such a depth that the food store of this little kernel will be exhausted before the leaf shoot reaches the surface of the ground. If the wheat is buried too deeply, it will die of starvation and suffocation.

Dealing with the needs of fertilizing wheat, the bulletin goes on to say that the food supply of the soil should last throughout the whole life of the plant. The roots take up in solution nitrogen, phosphoric acid, potash, lime, etc., carrying these to the growing leaves, where, under the action of sunlight, the food is manufactured into plant-cell material and carried to the centers of plant growth. From the very first the tiny growing shoot has fed upon the available nitrogenous food in the soil. As stalk-growth becomes more rapid, considerable potash is made use of. In a short time, stalk-growth reaches its maximum, and the plant has to provide for its reproduction. Late in June or early in July, tiny flowers open and become fertile, and the new wheat berries begin to develop. The time between the flowers becoming fertile and the complete filling of the kernels is very short—not over ten days or two weeks in many cases. The kernel contains almost 90 per cent. of the phosphoric acid of the plant; therefore, in the filling of the kernel this element of plant food plays a very important part. It is easily seen that the amount of phosphoric acid available for plant food within this time may determine the quality of the crop of wheat. The ground may have been in good physical condition, the seed may have been of excellent quality, the season may have been favorable, but if there is a scarcity of phosphoric acid at this time, the wheat is not only poorly filled, but its quality is inferior.

The effect of suitable fertilizer upon wheat, when used in sufficient quantities, is threefold. A judicious amount of suitable fertilizers increases the yield as well as the weight of the wheat. It also increases the amounts of the valuable constituents of the wheat, viz., starch and gluten. The third effect of fertilizers upon wheat is the influence it has upon the bread-making qualities. The increased vigor and activity given to the growing cells of the wheat plant, by virtue of an abundant supply of available plant food, just when it is needed, produces not only much larger yields of grain, but grain of a superior bread-making quality.

It is just as necessary to have an adequate supply of food available for a crop of wheat, as it is to have plenty of food at hand in order to grow a drove of hogs. To the profitable use of fertilizer must also be added the benefit accruing to the land from the residual fertilizer, left behind by the wheat crop, and benefiting future crops.

Fertilizing the wheat crop is quite generally of great assistance in securing a good stand of clover and of causing it to grow into a good crop. The increased crop of clover, of course, increases the prospects of a good corn crop, so all in all, it seems that the first direct profit



A Herd of Red Poll Cattle.

Shown by W. J. McComb, at Western Canadian Fairs.

from wheat fertilization may be but a smaller part of the total profit.

For the typical wheat soil, which is well supplied with organic matter in a good state of tilth, an application of 200 to 400 pounds of a fertilizer carrying a fair amount of nitrogen, a liberal supply of available phosphoric acid, and a medium supply of potash, has been found very beneficial. Such a fertilizer would analyze about 2% to 3% ammonia, 8% to 10% phosphoric acid and 2% to 3% of potash.

Care of Farm Machinery.

To properly care for the farm machinery means that it must be well selected, kept in good repair and adjustment, oiled thoroughly, cleaned before housing, and it must have all wearing parts well greased when not in use, and painted when necessary, and it must be properly housed. At least one-half of "good care" consists in keeping the machinery properly repaired, in good adjustment, and thoroughly oiled when in use. To neglect any of the lines of care mentioned, means serious damage and loss to the machine. If these statements, made by H. M. Bainer and H. B. Bonebright in a Colorado bulletin after extensive investigation into the matter in that state, be true, it is surely evident, that only a very small percentage of farmers, in every county, properly care for their machinery.

The fact that such a large percentage of the machinery is allowed to stand in the open is partly, but not wholly, explained by the marked scarcity of suitable machine sheds upon the farms. In a large number of cases the housing consists of "going through the motions" rather than actually preparing the machinery for storage and then properly storing it in a suitable shelter.

Whether the machinery is to be housed or not, it should be cleaned and thoroughly oiled at the end of the season. With such machinery as the binder or mower, it is a good plan to thoroughly oil all bearings and wearing parts just before finishing the season. After removing all dirt, wipe the entire machinery with an oiled rag or waste. The wearing parts especially should be well greased with tallow or axle grease. If the entire machine is to be housed these wearing parts do not need to be removed from the machine, but they should be removed and stored in a dry place under all other conditions.

To house machinery does not always do as much good as is commonly supposed. Machinery may be just as well cared for if it is allowed to stand in the shade of a tree, as if it is stored in some of the leaky sheds, open sheds, poorly drained sheds, or combined machine sheds and hen roosts, such as may be found in the country. There is no question but that to properly house machinery is a great saving, as it not only adds a great deal to the life of the machine but it also adds to the general appearance of the farm. It is generally found that where a farmer is interested enough in his machine to properly house it, he is also interested enough in it to care for it otherwise.

Cultivator shovels, plowshares, and attachments, which have been removed and greased, should be placed where there is no chance for them to get damp. It is a good plan to place them in a gunny sack and suspend them from the rafters of the shed or barn.

A great deal of farm machinery can be placed in a small space if properly arranged. At the time of storing the machinery it should be placed in the shed according to the time it will have to be removed. The machinery that will be used late during the following season should be placed in the back part of the shed, and that which is to be used early in the season should be placed in front. In this way, it will not be necessary to remove a great deal of machinery in order to get what is needed first.

There is no question but that it pays to keep the farm machinery thoroughly painted. This is especially true with such machinery as is largely constructed of wood. The paint fills all pores and cracks, prevents checking, prolongs the life of the machine, and also adds very much to its appearance. Two or three dollars worth of good reliable ready-mixed paint for outside use, or carriage paint applied each year to the machinery found on the average sized farm, will add many times the cost of the paint to the value of the machinery.

It is not always necessary or advisable to construct a special building for storing farm machinery. Often a very good place can be made in the barn or other buildings. By taking some of the parts off certain machines they can be easily stored in what otherwise might be waste space.

The characteristics of a good implement shed are: (1) It must be thoroughly drained so the implements do not stand in a wet place. (2) It must protect against sun, wind and moisture. (3) It must not be too expensive. (4) It should be located in a convenient place and so arranged as to be easily used.

Cement for Street Paving.

At the last meeting of the Association of American Portland Cement Manufacturers, recently held in Chicago, a number of papers were read by leading highway engineers throughout the United States, including Logan Waller Page, Director of Public Roads, Department of Agriculture, Washington, D. C.; Edward N. Hines, Road Commissioner, Wayne Co., Mich., which county has probably built more concrete roads than any other in the world, and finds them cheapest and best for fairly heavy traffic; S. McCullough, City Engineer, Fond du Lac, Wisconsin, and others. After making various comparisons between different road metals, Mr. Page concluded his remarks as follows: "We may be practically assured that the Portland cement concrete road is far better able to meet that changing traffic conditions than either of the other surfaces, plain macadam or bituminous macadam. From our knowledge of Portland cement concrete, we can design a road surface of this material to meet practically any requirements."

The Ontario Highways Report, under the subject of "Concrete Roads," contains the following: "Attention has recently been drawn to concrete pavements which have been treated with a surface painting of tar, over which a thin layer of fine gravel is spread, just sufficient to be saturated and held by the tar. In appearance, these pavements resemble sheet asphalt, the tar-and-sand coating overcoming the glare and reflection of heat. The tar and sand fills the expansion joints and depressions, serving as a wearing surface. The expansion joints disappear from view, and do not chip at the corners. The tar and sand coating deadens the noise of traffic, makes the pavement impervious to moisture. If cracks appear, they are painted with tar and sand, so that they do not crumble under traffic. The treatment, in short, overcomes the more objectionable feature of the concrete pavement. Concrete pavements, as heretofore laid in Ontario, have cost about \$1.15 a square yard. The tar treatment has cost about two cents a square yard, and the sanding 1 cent per square yard, per annum. If further experience proves the success of this treatment, it should be useful for the smaller towns and villages in paving their main business streets, and would be exceedingly effective for main highways radiating from large cities."

The type of pavement just described originated in Ann Arbor, Mich. For the past two years it has been subjected to all classes of traffic, and has met with entire success.

The Hessian Fly and How to Save Winter Wheat from Its Attack.

Many of the farmers of Ontario are not aware that the Hessian Fly has been attacking their wheat and causing much destruction. They have noticed numerous broken-down straws in the fields when cutting the grain, but have attributed them to other causes than the real one. In some fields this year 50 per cent. of the crop has been destroyed by this the worst insect enemy of wheat. Some of those who have suffered severely the last few years are thinking of dropping winter wheat out of their rotation until the Hessian fly ceases to be a menace. The life-history of the insect and the best means of control, will, therefore, be of interest to farmers.

Life-History.—The adult fly resembles closely a mosquito, but is a little smaller and darker. It is seldom noticed in this stage, but has three other stages, viz., egg, maggot, and pupa or flaxseed stages. At the date of writing, August 9th, the insect is in the pupal stage in the wheat fields. These pupae look very like flaxseeds, and are to be found in the wheat stems near the ground. Remove the blade from the stem just above the first or second joint from the ground, and these reddish-brown pupae will be seen. Sometimes as many as twenty are clustered together on a single, badly-attacked stem. In a few weeks these pupae will change into the black, mosquito-like adult; in fact, some have already done so in my rearing cages. These flies live a few days and lay their eggs on the wheat plants that spring up in stubble fields or in early-sown fields. Soon little legless maggots hatch from the eggs and feed on the young plants at the crown, frequently doing much damage and causing the wheat fields to look a sickly-yellow color late in fall. Before winter, most of the maggots are full-grown and have changed to the flaxseed stage. Next spring, about June, these transform into the adult flies. These now lay their eggs on the lower wheat leaves, and the maggots, on hatching, work usually just above either the first or second joint between the leaf and the stem, causing the latter to become weak and bend over, or rot infrequently to break off. The feeding of maggots deprives the head of its proper supply of food, and thus injures the grain. In some cases a plant is so badly attacked that it is unable to head out at all.

Means of Control.—The best means of control is to prepare the seed-bed with extra care, so that it will be in excellent shape when sown; to select good large, plump, unsprouted seed (small grains can be removed by the fanning mill), and not to sow any wheat before the 5th of September. In the warmer parts of the Province, the 10th or 15th would be preferable. If the seed-bed is in proper condition, this late-sown grain should grow rapidly and produce good vigorous plants before winter. The better it grows, the less injury it is likely to receive from the fly. The object of late sowing is to wait until the flies have laid their eggs elsewhere, or died before the new crop appears above ground. Plowing down or burning over wheat stubble as soon as the grain has been hauled in, or, on the other hand, running a cultivator or disk over the field to start the wheat growing, and induce the flies to lay their eggs on these plants, and then plowing them all down in September to destroy the eggs or maggots; or sowing a strip or two of wheat in August in the field intended for wheat this year, and letting this grow up for the flies to lay eggs in, and then plowing it under just before seeding the whole field, are each helpful methods of control wherever they can be applied, but the main remedies are those first mentioned. Late sowing is likely to be very effective this year, because the showers we are getting in August will hasten the appearance of the flies more than dry weather would, and, therefore, they are likely to lay their eggs considerably earlier.

Several kinds of parasites are attacking the maggots and pupae of the Hessian fly. Some have already emerged in my rearing cages, but it is not safe to depend upon them to keep it under control.

O. A. C., Guelph.

L. CAESAR.

Glimpses of a Highland Farm.

For a farm-bred Canadian, a visit to Scotland would not be complete without seeing the Scotch farm and farmer at close range. You perhaps think that a farmer such as we meet in Canada—one who is quite independent, active, progressive and industrious, is unknown in Scotland, for we generally associate with Scotland the idea of landlord and peasant. However, the one I am going to write about represents a type equal to any Canadian land-owner.

It was my privilege, when touring through the Highlands, to visit one of the estates there. Unlike so many in Scotland, this one was owned by a man who started in very humble circumstances, but, by dint of honest toil, had within recent years purchased the estate on which we found him living.

After receiving a most cordial welcome by the owner, who, by the way, was a distant relative, we were taken to see the many buildings massed together on the estate. First, we were conducted to the dairy department, for cheesemaking was a very important industry carried on there. Thirty-four cows, all Ayrshires, grazing in a field nearby, provided the milk which was contained in a large vat in one of the rooms. At one side of the receptacle is a large strainer, through which the milk was poured, and taps were found on it, from which the milk was allowed to run out, if necessary. It contained thirty gallons of milk, but before the process of transformation would begin, the next day's milk would be emptied into the vat. From this apartment we proceeded to another, where presses and curds were in evidence. The curds would be used in making the next day's cheese. There were two churns before us, and a little engine near-by explained how the churning was done. The many rolls of butter, neatly arranged on shelves, showed that buttermaking was also carried on there. The cheese-room came next, and it would take a long time to count all those white cheeses arrayed on their shelves. We were told that seventy-five had been sent away the previous week. It takes about three months to cure them, and they have to be turned every day, the process taking one of the maids one-half hour each morning.

Dairying was not by any means the exclusive industry on this farm, for we were next conducted to the piggery. Here were some fine white porkers resting themselves. So white and clean were they that I thoughtlessly inquired if they had a bath every morning. "No," was the answer, "but the haunts are scrubbed out every morning." Pipes could be seen carrying the clean whey into the troughs from the dairy rooms. Surely this was a shrewd farmer, who knew how to utilize by-products to the best advantage.

The byres, where the cows are kept, were next to claim our attention, and there the clean stone floors, the stone troughs and stone partitions bespoke the thoroughness of the owner. The stables for the horses were of the same character, and from them we were led to the granary, where we were shown the chutes that carry the grain to the bins as it is threshed. The threshing outfit was also in proximity, including the engine fed by

paraffin oil. Near-by were the sheds, where the vehicles and machinery, which they designate as the "traps," were housed. The poultry house, at some distance, was another addition to the interesting group of buildings.

After spending some time thus, we were out again, about to retrace our steps to his home. We looked about, and there were many hills which were fit for grazing, and also small stretches of level land where hay and different grains were grown. They believe, in Scotland, in intensive rather than extensive farming. Weeds grow but they quickly become an unknown quantity for a close watch is kept upon them to get rid of them.

Turning now to his home, evidences of refinement and culture were everywhere present in the beautiful but home-like furnishings, the music room and library. Besides his wife and daughter, there are three maids, and three men employed, and these together with the owner make up the household.

After partaking of a meal in his home, for Scottish hospitality means at least such, we returned by the picturesque low road to a Highland village.

MARION BELL.

Sulphur as a Soil Fumigant.

It is strange that it should have been reserved for the twentieth century to discover the fertilizing effect of applications of sulphur. Experiments carried out in France, and confirmed in Germany, prove that small dressings of flowers of sulphur greatly increased the yields of several crops. The increase was greater than that derived from a complete mixture of artificial manures, but greatest of all when both applications were made. Investigations indicate that it is, as a soil fumigant, and not as an actual manure, that sulphur is beneficial, the cause of the benefit, apparently, being the destruction of soil organisms injurious to plants. It will be easy to test the benefit of sulphur for various crops on a small scale, by applying it to the soil two or three days before sowing at the rate of 90 to 100 pounds per acre. Soil fumigants, as a rule, should not be applied to growing crops, though sulphur may possibly be an exception.—[Agricultural Gazette.

Carleton Co. Crops.

Hay has been a good crop, and oats promise well, but corn can't beat half a crop. Pastures are in excellent growth, and cattle are doing well, both pail and beef. The shortage on the high lands will likely produce numerous sales of stock early in the fall.

VIRGIL MCKENNA.

Carleton Co., Ont.

THE DAIRY.

Holsteins Losing Constitution.

That the constitution of Canadian Holstein cattle is degenerating, in the cheese factory sections at least, is the opinion of Thos. Bradshaw, of Tweespruit, Orange River Colony, South Africa, who has been in Canada lately, selecting a shipment of live stock for South Africa. Having lived most of his life in this country Mr. Bradshaw has a warm regard for Canada, and insisted upon trying a shipment from the Dominion, notwithstanding the prejudice against Canadian stock arising from an inferior consignment forwarded to that country on a previous occasion. Mr. Bradshaw reports that Canadian and Australian cattle do better in South Africa than European importations, and Holsteins are the prominent breed not only because of racial predilection but because they do better there than other breeds, such as Ayrshires for instance. Why this is so he cannot explain, but that his opinion in the matter is unprejudiced may be argued from the fact that Mr. Bradshaw had charge of the Ayrshire representatives at the Pan-American dairy test in Buffalo.

No good beef cattle are raised in South Africa, the best roasts being from old work oxen; stall fed milkless cows are not wanted in South Africa. Only the deep-milking strains of Short-horns would have any chance of popularity.

Reverting, however, to the subject of Canadian Holsteins, Mr. Bradshaw, while pleased with his purchases in the Brockville section, and elsewhere, was disappointed at the comparatively small proportion of the breed which he found up to the mark. Too many weedy individuals lacking in constitution, were seen, and the effect of the cheese-factory system was especially evident in the young stock. He is, too, of opinion that there should be an inspection of stock to qualify for registration. Broken colors and grey hairs through the black spots are too prevalent. Fewer registrations, a little more care as to color markings and constitution, and better development of the young stock are some of Mr. Bradshaw's ideas about maintaining and advancing the standard of the breed.



A Bunch of Manitoba Pigs.

Good Milk.

What is good milk? Probably the ordinary consumer thinks at once of milk rich in fat, some may even like half milk and half cream when they call for a glass of "good" milk. The more important point by far is that the milk be clean. Clean milk means not only milk given by a healthy cow kept in sanitary surroundings, but includes freedom from injurious bacteria. To produce such milk is the goal towards which the energies of our cleverest men, our foremost scientists and sanitarians and our highest type of dairy farmers are striving with the utmost endeavour.

It may interest consumers to know a trifle more definitely just what this means. Health officers in various districts exercise a rigid inspection of stables and dairy cows; and, collecting samples of milk, by a simple method they count the number of bacteria found in the volume of one cubic centimeter.

Then the careful milk producer, the man who has clean, healthy cows, stables free from dust, pure water supply and wholesome feed, milk kept cold and handled in thoroughly clean utensils, reaps a double benefit. He is paid two premiums. If his milk is up to a certain standard of fat, he gets standard price, if it is not rich enough to conform to that standard, the price is lower; the richer the milk, the more he is paid. But, further, if his milk runs at a certain number of bacteria per c.c. he gets standard price; if the number is lower, he gets a higher price. Thus, everyone is better off, the producer gets paid a premium for his extra care and cleanliness, the dairy company has the satisfaction of purveying a very superior article of diet and the consumer receives the best milk that can be produced, clean in flavor and really clean, at a reasonable price. It is worth a good price.

Milk may be said to be fairly good if the bacteria count runs at 75,000 per c. c. Some dairy companies having paid special attention to clean milk, have succeeded in securing a regular supply that will average below 20,000 per c. c. This is good milk. But some dairy farmers are doing much better than this. One company pays a premium of one cent per gallon for milk containing 10,000 bacteria or less per c.c.; the sliding scale increasing as the milk is better in about this proportion, a premium of two cents per gallon for 5,000 bacteria per c.c. or less, and three cents per gallon for 500 per c.c.

Where the results of the laboratory count of

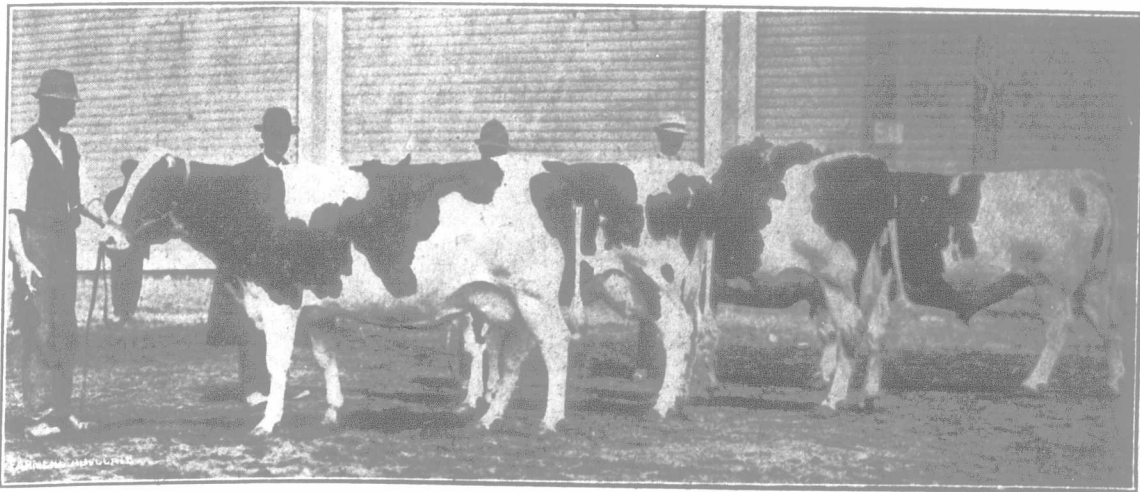
bacteria are posted on the bulletin board for all milk producers to see, it has followed that this test is revolutionizing the sanitary methods of production. Hence, in some sections, are to be found a few excellent dairymen who regularly furnish milk containing less than ten thousand bacteria per cubic centimeter. This is certainly "good" milk.

C. F. Whitley.

Pooling vs. Babcock.

Editor "The Farmer's Advocate":

The use of the Babcock test in the breeding of dairy cows is everywhere accepted as invaluable, and dairymen everywhere are profiting by it. Some of the breeds are high producers of fat, while others are low. There are variations in the individuals in each breed. There may be a variation of from three to six per cent. butter-fat in each creamery. Is it not surprising that about nine-tenths of the cheese factories are still paying the same for 3-per-cent. as for 6-per-cent. milk? The Holstein cow usually gives a large quantity of milk, but often low in fat. The Holstein cow is very popular in cheese-factory districts. This may help to keep the unjust pooling system alive. But the Holstein-Friesian Association, as well as all other breeders, make butter-fat the standard of merit, and are, by skilled breeding and feeding, getting not only individuals, but herds of breeds, wonderful producers of butter-fat. The Babcock test directs all dairymen where the best sires and dams can be secured. Prof. Dean has been and still is a great aid to the pooling system, by insisting that a fat test is valueless, unless you measure the other solids. The test for other solids is not needed, as it has been shown at Guelph and other stations that the amount of cheese in milk was governed by the amount of fat, so closely, that a very little added for better quality would have equalized it. In an address, a short time ago, Prof. Dean said the housewife thought that, when she had a lot of cream, she had rich milk, but the other solids were more valuable than fat in this hot weather, assuming that lots of fat did not indicate a large quantity of the other solids. The Scotch letter in "The Farmer's Advocate," page 1286, speaking of the Babcock, says: "This is undoubtedly one of the greatest accessories to modern dairying. Without it, it is scarcely conceivable that the factory system could be carried on. Those who do not appreciate the work of Dr. Babcock do not understand modern dairying or know what a butter-fat



Winning Holstein Herd.

At Calgary Exhibition, 1912. Owned by Michener Bros., and headed by Sir Pietertje of Riverside.

test means." It is a pity that the Professor would not help, instead of hinder, the adoption of the test. That yearly grist of fines that casts a cloud of sorrow and shame over the district will continue until the test is adopted. The Chief Instructor has expressed surprise and regret that only ten per cent. of the factories had adopted the test. How would it do for the instructors to secure samples of every patron's milk? Give each one in his month's statement what he gets by pooling, and what he would get by test. Keep this statement in the cheese factory, so that each patron may learn whether he is robbing his neighbor, or his neighbor robbing him. If it is thought that this might create too great an uproar, and injure the state of the factory, this statement might be published through the agricultural press, without name of factory or patron. It would at least be interesting and instructive reading. Try it.

Middlesex Co., Ont. THOS. B. SCOTT.

Summer Feeding of Dairy Cows.

Editor "The Farmer's Advocate":

The period of the year when the farmer is confronted with the most trying time to keep the herd of dairy cows in respectable condition, and at the same time keep up the supply of milk, is that period when the grass begins to turn brown and becomes unpalatable for the cow. Such a period each farmer must face, under normal conditions every year, and the best means of supplying the palatable substitute for grass is a much-discussed question.

To the man with a silo of corn for summer use, the problem is an easy one. Cows on grass never lose their appetite for a feed of silage, either before going out in the morning or on coming in at evening. If the ensilage has been made from corn that has been cut in the last stage of maturity, the question of its keeping is largely solved. This year we are still feeding silage that is of last year's crop, and the quality has not been injured in the slightest by the long period in a cement silo. We find that the herd of milking cows will relish a feed twice a day, now that the pasture is becoming short.

If enough silage cannot be kept or grown for a lengthy period of summer feeding, there should be at least enough to feed the herd until other green crops are mature and ready for feeding in the green state. Among the crops for early feeding, rye is about the first to use. It is a crop that gives a bulk of green, palatable food, and, if sown slightly thicker than usual, it will lack coarseness of stem.

To follow the rye, the clovers will be ready for use, and especially alfalfa, which, on account of the early maturing of the first cut, makes it worthy of a high place. On soil that is of deep, porous nature, this valuable crop should be given a fair trial. The Grimm variety, sown at the rate of 20 pounds per acre, with a nurse crop of one bushel of barley per acre, will give three cuts of the best possible feed after one year's growth. On account of its not standing the effects of pasturing, it is adaptable to feeding the early cuts in the stable, while the cows are on pasture.

Mixtures of grain have been tried, and give satisfactory results. One of the best for the purpose is a mixture of oats and peas, Early Gothland oats and Prussian Blue peas, mixed in the proportions of two of oats to one of peas, and sown at the rate of three bushels per acre. This mixture may be sown as early in the spring as the soil can be worked, and will be fit for use around haying time, when the first signs of dry pastures usually occur. The best method is to sow the grain in plots ten days apart in the seeding, and enough area to feed the herd over the length of time needed, allowing one plot to be enough for a week's feed. This will give a continuous supply of feed that is not over-ripe, and forms one of the best combinations being used for the purpose.

To follow the grain, the corn crop will be ready for use, and a small field should be set apart for fall feeding. For general use, Improved Learning and Compton's Early form two of the best varieties.

The usual question in the mind of the general feeder concerns how far the feeding of green crops in the stable can be carried with success, when compared with continual pasturing, which implies little or no labor.

To make a just comparison, by taking one acre of pasture and one acre of different crops, the following results would be had:

Pasture—One acre will feed one cow for 6 months; one acre will feed 10 cows for 18 days; 20 acres will feed 20 cows for 6 months.

Feeding Mature Green Crops: Clover— $\frac{1}{2}$ sq. rd. will feed 1 cow for 1 day; one acre will feed 1 cow for 213 days; 1 acre will feed 10 cows for 42 days; 9 acres will feed 20 cows for 6 months.

Oats and Peas.— $\frac{1}{2}$ rd. will feed 1 cow for 1

day; 1 acre will feed 1 cow for 320 days; 12 acres will feed 20 cows for 6 months.

Corn— $\frac{1}{2}$ rd. will feed 1 cow for 1 day; 1 acre will feed 1 cow for 640 days; 1 acre will feed 10 cows for 2 months; 2 acres will feed 20 cows for 2 months.

Though this comparison will vary according to the season, it will still hold good that one acre of green crop is worth from three to five acres of pasture. The problem of labor is the one that many farmers find the most difficult to overcome. Even with this disadvantage, the saving of land is so much in the lead that it is economy to have green food of some sort to supplement the pasture.

The problem of sowing crops on stubble land for the fall pasturing of dairy cows is one worthy of mention. Such a crop as rye gives a pasture of green feed that often helps to keep up the milk flow, but if all is compared with the system of growing crops and feeding in the stable before milking, we will find the latter largely in the lead.

Macdonald College, Que.

W. J. REID.

Alfalfa and Silage for the Cow.

J. E. K. Herrick, President of the Holstein-Friesian Association of Canada, and now a resident of Illinois State, writes that, from investigations in his State, it has been found that it was cheaper to keep the cows in the barn the year around. At the Illinois College, he states, 15 cows are kept on silage and alfalfa the entire year, and they do exceedingly well. The cows are kept at a saving, and are not exposed to the flies. Mammoth Sweet corn he considers the best kind for feeding, as the cows eat it up cleaner than they do other varieties. Mr. Herrick is a strong advocate of silage, summer as well as winter, and is just as strong in favor of alfalfa.

POULTRY.

Care of the Chickens.

Editor "The Farmer's Advocate":

The cockerels should be removed to new quarters at a distance as soon as their sex is distinguishable. By this time they will be crowding in the brooder or brooder-houses. Both pullets and cockerels will grow faster as a result of the separation, because each will have, or should have, twice as much room as before. The cockerels are not so apt to be quarrel some, and fight if they are removed from the pullets at an early age; this materially increases their growth and ability to fatten. The sooner the early hatched cockerels are sold after they weigh a pound and a quarter a piece, the better it will be for the owner. This is particularly true, if the chickens are of the Leghorn type. Later-hatched chickens of the Plymouth Rock, Wyandotte, Brahma or other meat breeds can often be grown to a larger size with profit, and sold as roasters.

The chicken which weighs from two to three pounds, can be very much improved in tenderness of flesh, in plumpness of body, and in general appearance by special finishing. The cheapest growth that can be produced with poultry is the fat that is put into their bodies after the frame and muscles have been developed. Yellow flesh is preferred in the United States, therefore yellow corn always should be used in fattening. A good fattening ration is as follows:

Four parts (by weight) cornmeal, two parts wheat middlings, one part heavy ground oats, one part beef scraps. This should be fed twice daily, mixed with skimmed milk into a thick liquid. The chickens should have all they want to eat. After thirty minutes, the food remaining should be removed. Chickens which weigh two to three pounds should gain approximately half a pound each, per week, for the first two or three weeks. It is usually not profitable to fatten chickens longer than this.

If the pullets show, by the reddening of the combs, a tendency to lay, it will be necessary to retard their production. In order to do this, they should be separated from the younger pullets, and should be kept by themselves and fed a less stimulating ration.

A prolific source of loss in rearing chickens comes from the crowding, and smothering, and intimidating of the weaker and younger chickens by the stronger and older birds. Separating according to age is not sufficient. Frequently, chickens are found that are stronger and larger at three weeks of age than others which are six weeks old. These undersized chicks seldom make a satisfactory growth later if not separated from the others. Fear not only prevents the more timid from getting their share of food, but the food they eat cannot be satisfactorily digested and assimilated. The longer they are crowded, and jostled, the greater the contrast in size and strength becomes. It is surprising to see how a

flock of underlings will pick up and thrive when they are put in the yards by themselves.

Each hatch should be kept in brooders, and temporary yards separated from chickens of other ages.

A wire fence one and a half feet high, will be sufficient for a week or two to teach the chickens to return to their own brooder. For the very early hatched chicks we cover the panels with heavy muslin, which shuts out the wind and makes the place a warm, sheltered spot, where the chickens can run in for comfort when a cold wind blows outside. After two weeks the fence can be removed, and the chicks will return to their own brooder with great regularity. When there are several brooders, or colony-houses containing chicks of the same age, they should not be placed closer than fifty to a hundred feet apart. At this distance the chicks will invariably return to their own quarters. They will, however, flock together when being fed, and on this account it is desirable that there should not be more than five hundred chickens in a single run.

There are many ways of losing chickens. In nearly every case the losses are due to neglect. Good care and proper attention at the right time will eliminate most of the losses. Open post holes, uncovered swill-pails, and water-pails, loose rolls of poultry wire into which the chickens can tumble or crawl, loose ravelings in the brooder curtain by which they are hung, crows, hawks, rats and foxes, all have to be reckoned with. Many of these causes of loss can be anticipated and avoided; it is small satisfaction to apply the remedy after the chickens have been destroyed. A little thoughtfulness about open pitfalls, felt curtains, instead of cloth, for brooder curtains, steel traps and shot-guns for crows and hawks, anise, molasses and strychnine on fresh meat for rats and foxes, will help to decrease the mortality among chickens.

The "gapes," like most other poultry parasitic diseases, is more easily prevented than cured. The parasitic worm which causes the trouble lives in the ground from year to year. If chickens are kept on board floors for a few weeks when young; or, what is better, if they are reared on entirely new ground each year, and not allowed to run where the coops or brooders have previously stood, little, if any, trouble will be caused by the gapes.

The loss in growth and vigor caused by lice and mites, is very great. Many a flock of chickens, that are otherwise well cared for, support hoards of parasites that sap their vitality and cause great mortality. A good, natural or prepared dust wallow should be provided. Grease or insect powder should be applied to all young chickens which are infested, and most chickens that have been hatched or brooded under hens are troubled with external parasites. Some of the liquid lice-killers, when painted on the perches, appear to be effective in killing body lice. The mites, which apparently cause even greater loss than the lice, can be destroyed by frequent application to the perches of kerosene, or crude petroleum and crude carbolic acid. Whitewash and petroleum, mixed, are also very effective. Every crack and crevice must be covered, or the few survivors will "multiply and replenish" the roost in a very short time.

A final inspection with a lantern, to see that the doors are all closed, that no chickens have been locked out, that the lamp flame is neither too low nor too high, that the gates are shut, that the chickens are under the hover, and all is snug and comfortable for the night, is the most valuable time spent in rearing chickens, except perhaps the time just before a heavy storm, when the chickens are hurried in out of the wet.

Chautauqua Co., N. Y. T. A. TEFFT.

Egg-production of Three-year-old Hens.

Up to what age should hens be kept for egg-production? To answer this question, 60 White Leghorn pullets that had made a high record the first year were selected from a flock of 240, and complete returns are given for three years, the most important data being as follows:

	1st Yr.	2nd Yr.	3rd Yr.
Eggs laid	10,280	8,943	6,907
Average per hen	171	149	115
Total profits	\$124.16	\$96.31	\$53.89
Profit per hen	2.07	1.61	.90

Of the 60 fowls, 83.3 per cent. laid the maximum number of eggs the first year, and only 16.7 per cent. gave the greatest production the second year. Though the fowls made a profit the third year, it did not compare favorably with that of the other two years, and was too small to justify the labor and expense of maintaining them. It is recommended that farmers adopt some method of marking their fowls so as to dispose of them after the second year, thereby securing the highest egg production and greatest profits from a given number of fowls.—[Maryland Bulletin 157.

Ventilation in Poultry Houses.

Good ventilation, without drafts, is an essential of a good poultry house. Without it, it is difficult to have a house that is either dry or sanitary.

The hen, compared with farm animals, has a high temperature; which will average about 106 degrees F. This means a rapid combustion within the body, and for rapid combustion much fresh air is necessary. It has been estimated (King, Physics of Agriculture) that a horse weighing 1,000 pounds breathes little less than 3,500 cubic feet of air in every 24 hours. A 1,000-pound cow requires less than 3,000 cubic feet. Two hundred 5-pound hens, while weighing the same as the horse or the cow, will breathe over 8,000 cubic feet of air in the same length of time.

Instead of ridding the body of the excreta of the kidneys in liquid form, as other farm animals do, the hen gives them off as a white paste that is passed with the faeces. All the water that in other animals passes off in the urine must be largely gotten rid of by the respiratory system. In order to do this work, nature has given the hen not only a good pair of lungs, but also a system of air sacks extending to all parts of the body, which are even connected with the cavities in the bones. Unless there is fresh air to reach all parts of the body, the hen will not do well. Unless there is good ventilation to carry off the moisture of respiration, the house is bound to be damp.

The fact that the birds are kept in quite large flocks is an added reason for thorough ventilation. King points out, in his Physics of Agriculture, that the poisonous principle given off by one individual is much more poisonous to another individual who is compelled to breathe it than it is to the individual giving it off. It is no uncommon thing to see a hundred hens on a farm crowded into a little house, with practically no ventilation. No matter how well such pens are fed, there will be a lack of thrift if each hen is compelled to breathe the poisonous gases given off by the rest of the flock.

In order to secure good ventilation, and at the same time have absolute freedom from drafts, a house termed the "open front" or "curtain front" house is built. This house is made absolutely tight on three sides by the use of matched boards and prepared roofing. The fourth side is equipped with cloth-covered frames. These are opened in calm weather, even though it is cold. When it is stormy, they are lowered to keep out the rain and snow. While a hen can roost in a tree in a high wind without catching cold, the moment she is placed in a direct draft inside of a house, she becomes snifty. It takes only a short time for a cold to progress into a well-developed case of roup. Once established, roup is likely to go through the whole flock. It is well to place both frames rather high, so as to avoid having the wind blow directly on the fowls when scratching on the floor. A good wind-break on the north and west sides often makes it possible to leave the curtains open on quite stormy days.—Iowa Bulletin, Farm Poultry.

Buyers, Encourage Better Eggs.

M. E. Rennington, in an open letter to buyers and shippers of eggs in the United States, says: It is a conservative estimate that more than \$45,000,000 are lost in the United States in the egg-producing sections annually because of improper handling. This enormous loss is due to small eggs, cracked and broken eggs, dirty, stale, heated (hatched) and rotten eggs. Just think of the waste this sum means, from the time the mother hen loses from her business of egg-laying in order to hatch and bring up the hens that lay these wasted eggs, to the money that the housewife pays for the bad egg that cannot be used. It is a loss to you, to the farmer, to everyone in the egg business, and to the consumer. Will you assist us in our effort to save this loss and to improve the egg that finally gets to market?

When farmers, peddlers, merchants, etc., come to you with eggs for sale, talk to them about the improvement of the market egg, and enlist their co-operation in the elimination of this great loss. Here are some of the fundamental points to be considered by all egg men, whether producers, shippers, or middlemen:

1. Encourage the production of large eggs. This can be accomplished by keeping pure-bred, "general-purpose" breeds of fowls, hatching only the eggs that weigh at least two ounces apiece, and from only the most vigorous stock. A higher price for large than for small eggs will help along the argument.

2. Infertile eggs do not hatch, do not form blood-rings, and seldom form black-rots. If the male birds are sold or penned up after June 1st, the flock of hens will lay more eggs, and they will be infertile.

3. A year-round observation of New York egg receipts showed that over 12 per cent. were dirty-shelled, and sold for a lower price on this ac-

count. You should buy these dirty eggs at a lower price, for you are paid less for them. If one nest is provided for each six hens, in a cool, dark place, kept clean and vermin free, dirty eggs will be reduced to a minimum.

4. More than ten per cent. of the eggs received in New York during the year are "seconds," because they are stale. Tell your eggmen that gathering eggs every afternoon, or twice daily in hot or murky weather, keeping them in a cool, clean, dry place until marketed, and marketing at least once a week, and more frequently in summer time, will reduce the number of stale eggs greatly. Of course, stale eggs are worth less money than fresh eggs all along the line.

5. Can you convince your trade that eggs from stolen nests and from incubators are never fit for sale? If the farmer thinks they are good, reliable food, urge him to eat them at home. For, since the egg-buyer can afford to pay more for large, clean, fresh, whole-shelled eggs, it is good business for the farmer to use small, dirty, cracked eggs at home.

6. Do you know how to candle eggs? If not, learn, and learn quickly! There is no other way by which you can determine the worth of what you are paying for. Having yourself learned how to grade eggs, show the merchants, peddlers and farmers in your neighborhood, by means of the candle, what kind of eggs they are bringing to you. Farmers are not scamps or egg-buyers angels. Show the farmer the kinds of eggs you cannot pay for, and he will find a way to eliminate the bad egg, and to make the good egg even better.

7. When first-quality eggs come to your packing-house, what means do you take to keep them so until they get to market? To build up and keep a good reputation for your output, you must grade carefully and uniformly; pack in good fillers, flats and cases; ship quickly and under good conditions. If you would be classed among up-to-date shippers, you must have mechanical refrigeration, that the chilling of the egg may begin the minute you receive it. Candle in a room where the temperature does not go above 55 degrees F. Ship chilled, in a good refrigerator car, in car lots. If you cannot chill the eggs before shipping, use a refrigerator car, well iced, and ship only the minimum load, that the eggs may receive the benefit of the ice before the market is reached.

GARDEN & ORCHARD.

Thinning Apples.

By Peter McArthur.

There may be more argumentative jobs than thinning apples, but, as yet, I have not come across them. For the past couple of weeks I have been constantly on the defensive. Everybody seems to think that I am more destructive than a windstorm and that I am simply wasting apples. But the last time Mr. Clement came to see the orchard he said that there was altogether too much fruit—that it would not mature properly and that if I wanted good fruit I would have to pick off a large percentage. Mine not to question why, mine but to do or die—and I went at it. In all the time I have been able to spare from other work and from arguments I have been stripping apples from the trees until the ground is covered with them. It does look like a slaughter, but there are still so many apples on the trees that there should be a big enough crop to satisfy anyone. Besides, I have a little demonstration of the value of thinning the apples that satisfies me entirely. There are two branches of the Red Astrachan that according to the traditions of the orchard have never borne on the same year as the rest of the tree. When we were spraying in the spring these branches had such a trifling sprinkling of blossoms that I thought they were going to live up to their reputation. The rest of the tree was full of bloom. However, the whole tree was sprayed thoroughly and the straggling blossoms on the branches that were supposed to have missed were saved as well as the rest. At the present time the Red Astrachan's are ripe and the two off-year branches are fairly well loaded with magnificent apples. Now that each stray blossom has matured in a perfect apple those branches are a sight worth seeing. Of course the rest of the tree is loaded, but the apples are small and many of them are badly shaped. All the best apples are on the two branches that were supposed to have missed. And I am inclined to think that the big apples on these branches would weigh fully as much as the small apples that are crowded on any two similar branches in the other part of the tree. And the big apples are not only a delight to the eye, but they are ripened better and are of finer flavor. An examination of that tree would convince anyone that it does not pay to have too much fruit on the tree, but I seem to be about

the only one it has convinced. "It just happened that way."

When Mr. Clement ordered the thinning to be done I admit I started at it with reluctance. There was one tree in particular that I hated to touch. It is a small tree that has nothing in it but fruit wood and every twig and spray is loaded. No one is able to tell me what kind it is, but those who are familiar with the orchard say it is a better apple than the Spy. Now, if there is a better apple than the Spy I want to know what it is. Yet they say that in the winter when they wanted a good apple to eat they would always take this one in preference to all others. Up to the present I have tasted no apple that suits my taste so thoroughly as a good ripe Spy and my mouth is watering already at the prospect of having something better. I have a sneaking hope that it is a new variety. I know that there are a few natural fruits in the orchard, that grew from roots of the planted trees after the grafts had died. Wouldn't it be great luck if this was one? I cannot imagine how it could be a better apple than the Spy and not be known to everybody, if it is an established variety. Anyway, this tree is so beautifully loaded that it has been the show tree of the orchard. I always took everyone to see it. But when Mr. Clement looked at it he said, "At least one-third of those apples should come off"—and they have come off. When he looked at the tree the fruit was not sufficiently developed for him to say what the variety is—especially as it is said to be better than the Spy. The number of apples that are better than the Spy must be very limited, but he did not seem to know what they could be any more than I do. I guess he must like Spies, too.

Though it was a painful job to pick so many apples off my pet tree, I was not much happier when thinning the Spies. I wished that there was some way of making them all mature properly, but as that way does not seem to be known to the scientists I did as I was told. But I didn't thin very savagely. I confined myself largely to apples that were badly formed or showed some blemish. Here and there on the lower branches there were occasional scabs and a few appeared to have been bitten or stung by insects, but on the whole the fruit looks clean and thrifty. The Baldwins, Kings and Pippins were well loaded but did not need any thinning. The chief destruction took place among the Ben Davises and Pewaukees. According to Mr. Clement, they had twice too many apples, and I guess he was right, for some of the branches were breaking under their load of fruit some weeks ago. I did not mind stripping the fruit from these inferior kinds and it was an easier job as all I had to consider was the number of apples to be left on the branches. They were all clean and well-formed, but on the Pewaukees especially they were so plentiful that some branches looked like clusters of grapes. On one branch I found a cluster of fifteen apples growing so close to one another that they could not move. They were wedged together like Brazil nuts. It would be impossible for such clusters to mature and color properly and thinning them out seemed to me a perfectly reasonable process, though when other people saw the apples on the ground they protested and could not understand why so much fruit should be wasted. Judging from all I have heard thinning apples must be something new in this part of the country.

They say that confession is good for the soul, and if it is I want to profit by it. There is one thing about the orchard of which I am ashamed, but, Honest Injun, I couldn't help it. In spite of good intentions the cover crop this year is going to be plain rag-weed. When the Department of Agriculture undertook to put the orchard in shape for me I promised to do my part of the work thoroughly and I meant to keep that promise. But I was not counting on the wet weather and the hay. The ground in the orchard was fertilized and plowed according to instructions and for the first couple of months it was properly worked. I got the buckwheat for the cover crop, but when the time came to put it in I was struggling with the hay and had to put it off. Then the rains came and after each shower it would be too wet to put in the seed. When it got dry enough I had to be at the hay and so it went until it was too late to put in seed. The weeds had got the start of me, and for some time past the branches of the trees have been so weighted down with apples that it would be impossible to get under them with a team. I know it looks bad and is bad, but I couldn't help it. Anyway, I know now as I did not before just why some farmers find it so hard to follow the excellent directions they get from the scientists. I couldn't do it though I wanted to. And it was impossible to hire anyone in the busy season to do it for me. Next year I hope to

have things figured out so that I shall not have more than one important thing to do at a time, and then I can perhaps do better.

* * *

When working in the orchard I was surprised to find so many bird's nests with eggs in them and the birds brooding. The pestiferous sparrows are still multiplying, but I did not get a good look at the other birds that are nesting, so do not know what kind they are. One nest interested me particularly. It is on a heavily loaded branch of a Pewaukee tree and the bird flew out in my face so suddenly that I did not get a chance to see it. In the nest were two small pearly white eggs and one large dark speckled egg. I am told that the nest is that of a canary, but I am afraid that the mother bird has deserted it after being disturbed. Though I have been back to the nest several times, she has not returned. It was my intention to leave the eggs as they were, so that I could find out what other bird had played the cuckoo trick and laid its egg in the little bird's nest. The cow-bird is the only one I have heard of in this district that does this, but I have not seen a cow-bird this summer. The sparrow's nest I found very interesting, as it was so carefully thatched and finished with so much attention to comfort. It looked to be simply a bundle of grass, but there was a round opening in the eastern side and the inside was lined with downy feathers. There was only one egg in it. I thought that the birds were done nesting long ago, but the number of nests I found with eggs in them convinces me that I was mistaken. Still, it strikes me that this is pretty late in the season for migratory birds to be bringing out their young. They will hardly be strong enough for the fall flight.

* * *

Have you had a feed of "musheroons" this year? I know the proper name is "mushroom" but we called them "musheroons" when I was a youngster and the pronunciation still prevails in many parts of the country. Moreover, I find that "musheroons" is the old English name, so no one is to be blamed very much if they use it. Anyway, they have been quite plentiful in the pastures since the wet weather set in, and we have had some glorious feeds. So far I have confined myself to the old-fashioned pink variety, though many others are to be found. Although I am convinced that I have found true specimens of the Fairy Ring and oyster mushroom, as described in books and articles, I am not going to venture to try them until I see them used by someone who is familiar with them. Last year, with much fear and trembling, I tried the inky mushrooms, and found them good, but not so good as the ordinary field kind. Those who have tried many kinds, say that the old-fashioned pink ones are still the best of all, and while they are plentiful I shall take no chances with strangers, however tempting they may look. One cannot be too careful when the poisonous kinds are so very poisonous. I do want to try puff-balls if I can only find some of the good big ones that I used to kick to pieces when a boy. I am assured that none of the puff-balls are poisonous, and that some of them are every bit as good as the mushrooms. I tried a few small ones last year, but did not care for them. And that reminds me that I didn't look in the pasture this morning to see if any mushrooms came up last night. If I cut this off right here I'll have time to go before dinner.

Saving Tomato Seed.

Farmers need not be dependent upon purchased tomato seed for the home garden. In some cases canning and catsup factories separate by machinery large quantities of seed, but seed of this indiscriminate character, entirely without selection, should never be used or placed on the market. Reputable seedsmen have breeding plots in which varieties are produced and improved by selection, or get supplies from expert growers under contract. Excellent seed of many varieties, reasonably true to type, can thus be obtained, but there is an increasing tendency among skilled growers to save their own seed. The plants, fruit and other conditions being equal, the home-selected seed should be best. But do not trust to use the seed from the odds and ends left on the vines. Earliness is one of the characteristics usually sought after in tomatoes, because they are prized as a treat for the table, and if there be surplus, they are worth more than the late fruit that goes on a glutted market. Do not choose the biggest specimen, for it will likely have irregularities that are liable to be transmitted to your crop next season. Choose specimens of good size, smooth, free from black ends or flaws, thick-fleshed, and otherwise desirable. In many town families now there is a call for a fancy dessert tomato of smallish size, that can be served whole. For home canning, a medium-sized

fruit is liked best. If earliness is desired, choose from a plant that has the most early specimens. The plant, as a whole is to be considered. It should be of good healthy stock and foliage, with the latter not so rank as to retard ripening. It should be a prolific bearer, producing a large number of good specimens. Of these, select a few of the best, and let them ripen on the vines, though, if necessary, some days in the window sun will thoroughly finish the maturing. Then wash or press out the seed from the pulp, and spread out clean and thin on a cloth in the sun to thoroughly dry. Next, sort them out in packets, such as a cheap envelope, named, and keep in a dry place till ready for sowing in the hot-bed next spring.

If practicable, stick to the variety that has done well in your own garden, but it is well always to be on the alert for something better to try on a small scale. But, for your main crop, the safest plan is to select according to the foregoing suggestions from your own crop. It is well to have at least two kinds in the garden, one a little later than the other, so that table or canning supplies will be spread over a longer season. Intelligent selection and careful methods in growing constitute a reasonably sure pathway to improvement in tomato culture. Growing plants from your own seed adds greatly to the interest of the farm home garden.

Peach Growing and Diseases.

A new bulletin on peach-growing and peach diseases by F. M. Clement, B.S.A., and L. Caesar, B.A. B. S. A., has just been issued by the Ontario Department of Agriculture. This is one of the best works pertaining to the peach and its culture ever produced in this country and should receive the attention of all those interested in this kind of fruit. Ontario has within its area 90 per cent. of the peach trees grown in Canada, the 1911 census crediting this Province, with 1,681,850 out of a total of 1,884,459 trees, an increase of 31.1 per cent. over the census of 1901. The soil and climate in many localities is excellently adapted to peaches, and peach growing should increase and prove a very important factor commercially within the next few years.

With regard to site, Mr. Clement says:

- (1) Use a northern slope, or at least a spot where there is a free circulation of air on the coldest nights. Avoid hollows: frost or cold air settles in them. A southern slope, almost without exception, should be last choice. This is warmest during the bright days of winter and early spring, and is sure to start the buds sooner than the colder northern slope. Wind, on nights we have frost, usually comes from the north. However slight the movement the north slope gets it, while on the south slope the air is perfectly still, and frost is sure to settle there.
- (2) Use the dryest soil that will retain moisture. A peach tree must have a large quantity of water, but at the same time there must be no surplus moisture. The tree is very susceptible to it. Keep it dry. Drain the soil.
- (3) Give sand or sand loam the preference. At the same time, do not forget the sub-soil. It is just as important as the surface soil, and must be of a loose, porous texture. Sand is much more easily cultivated than clay, and though it may require a little more fertilizing than clay, the same quantity of humus that will put the clay in first-class condition will make sand first-class also.
- (4) Do not plant on a wind-swept hill simply to get air drainage or air circulation, and at the same time do not plant too near a high wind-break. There must be air, but it must not be excessive, or almost entirely shut out. Use common sense.

The following varieties are recommended for the commercial plantation, for Canadian markets, covering the entire season. They are given in the order of ripening, and though each is recommended it does not follow that they should be given an equal place in the plantation. Some are better than others.

(1) Alexander, (2) Triumph, (3) Yellow St. John, (4) Early Crawford, (5) Garfield or Briden, (6) Reeves Favorite, (7) Niagara, (8) New Prolific, (9) Elberta, (10) Crosby, (11) Chair's Choice, (12) Smock. Any five of these varieties would make a good combination for the commercial orchard.

Trees are planted from 16 ft. x 16 ft. to 20 ft. x 20 ft., according to heading system followed. Spring is preferred for planting, but fall is also practised.

The first two seasons pruning is intended to stimulate wood growth. The framework of the tree is started the first year and the second year all that is necessary is to thin out new growth. The third year it is time for the tree to produce fruit, and to thin out too severely or cut back very heavily may mean the loss of a large number of fruit buds. It is well then to wait till

late spring, when the crop prospects are fairly definite before beginning pruning. A tree three years old should bear from one to two baskets; sometimes they bear much more, but usually a great deal less. And this quantity is given only as a guide to indicate what is possible at that age. The thinning out of the very thick parts of the tree and the removal of such branches as are drooping or are likely to be injured during cultivation may take place at any time. Whether to head-in or not is at the discretion of the grower. Too severe cutting back, one-half or two-thirds, is not recommended. Thinning out and cutting back about one-third would be much better. No one can tell how to prune. We must have the tree before us and do the work ourselves. Very severe cutting back or heading-in, in the colder districts is not practised because of the small tender growth thus produced.

Clean cultivation followed by a cover crop sown about July 1st is recommended, cultivation, according to the author, being the cheapest and most valuable fertilizer at the disposal of the fruit grower. Cultivation should never be more than five inches deep. Cover crops supply most of the necessary plant food for the tree.

Thinning is advised to produce a higher quality of fruit and to prevent overworking of the tree. Just after the "June drop" is a satisfactory time to do the work.

Peaches are ready to pick for the home market as soon as they are spongy to the touch. A red cheek with a yellow tinge from which the green has entirely fled denotes maturity. Five things to remember are:

- (1) That the fruit must be ready.
- (2) That you are handling peaches not stones.
- (3) That when once the fruit is picked shade is preferred to hot sun.
- (4) That moisture hastens decay.
- (5) That some one is expected to eat every peach put in the basket.

The portions of the bulletins covering diseases of the peach deals with every known disease simply and thoroughly, and space will not permit a review of all the important facts brought out, but this is one bulletin which should be in the hands of every peach grower.

Grape Growing—Its Cost and Problems.

Grape-growing is not one of the largest industries in Canada, but it has its place, and in the Niagara Peninsula is one of the branches of the fruit industry which has been quite extensively and successfully carried on. J. B. Revett has recently compiled for the Ontario Department of Agriculture a useful bulletin on "Grape-growing," which contains some good, practical information, based on the work with this fruit as it is carried on in the portion of country mentioned.

Of the early varieties, Champion, Moore's Early and Campbell's Early are considered best; and for main-crop varieties, Worden, Delaware, Concord, Niagara, Lindley or Rogers No. 9, Agawam, Vergennes and Brighton, are among the best.

The best soil for grapes, outside of special locations, is a deep, rich clay or clay loam. When grapes are planted on these heavy soils, they ripen their fruit better, and the flavor is much more pronounced and color better developed than with grapes grown on sandy soils.

Soil should be plowed the fall previous to planting, and furrowed to ensure good surface drainage. Planting should be done between first and twenty-fourth of May. In light soils, plant ten feet apart each way. On heavier soils some growers recommend planting rows ten feet apart and vines nine feet apart in the rows. Land must be well prepared for planting. The plow is used in planting, going twice in a place, leaving a furrow in which to set the vines. The different methods of cultivating and pruning are thoroughly discussed.

A topic of interest at the present time is harvesting. On this the bulletin advises never to pick grapes until they are ripe. During the past years there were growers who have been extremely eager to obtain the highest market price for their grapes, and to do this they pick their grapes without proper regard for ripeness. Their whole endeavor is set on getting to the market with grapes before anyone else, and incidentally to palm off on the unsuspecting public an article not fit for hog feed, much less human consumption. If there were only individual cases of this fraud being practiced, it would not be so bad, but the neighbors see the grapes going to market, and the temptation seems to be almost irresistible, and we find growers all over shipping green grapes. Ask them their reason, and they will reply that the other man is doing it and getting the high prices. What is the result of this marketing of green grapes, and whom does it affect? The answer to the first question is very apparent. The consumer gets the green grapes and decides that either they are green and unfit to eat, and that he has been cheated, or that he has lost his taste

for grapes, and what is the result? A falling off in consumption. The good prices that are obtained on an early market do not last long, and the growers suffer. This regrettable feature should be eliminated, and the growers should do everything in their power to stop themselves and their neighbors from selling green grapes. Grapes do not require to be picked before they are ripe in order that they carry well. On the other hand, they carry better and keep longer when they are picked ripe.

The question may then be asked, when is a grape ripe? A grape may be said to be ripe when it has received its full development of color and flavor.

The grapes are picked directly from the vine and put in the baskets, which are placed, when full, on the shady side of the vine, to be picked up later by the wagon. The bunches should be handled as carefully and as little as possible, in order not to rub off any of the bloom. The bunches are severed from the vines by means of grape-pickers. This little instrument is very much like a pair of scissors, but the blades are very small. A knife should not be used, as it necessitates holding the bunch more firmly, and the act of cutting the stem with a knife requires a forward pull, which tends to bruise the bunch. The stem of the bunch should be cut short, about an inch to one inch and a quarter. Any dried or green berries must be picked out with the fingers. The bunches are then placed in the baskets, so that they are not loose. Those bunches forming the top layer of the basket are placed stem downward, which gives the basket an attractive and finished appearance.

Few growers of any crop ever figure the cost of production, grape-growers not excluded. In figuring the cost of production of one acre of grapes, it must be remembered that there are two years in which no crop is produced. Mr. Revett figures everything in connection with the crop, including cost of 435 vines, planting, cultivating, fall plowing, the land itself, fall preparation, spring cultivation, interest on money, pruning, tying, wiring, spraying, and all accessories, and here is what it amounts to: Total expenditure per acre, first year, valuing land at \$125, \$162.40, less \$10 for inter-crops; second year, \$125; third year, \$31.20, less cost of handling crop, estimated at \$19.80, bringing crop up to \$51.00. But the third year crop is valued at \$52.20, leaving \$1.20 profit, and, when management for three years is reckoned at 5 per cent., making \$16.92. The net cost for the first three years is \$293.12. The vineyard is now in a condition to show a profit, which, under the same process of calculation, would give a return of \$22.85 per acre the fourth year, and increase thereafter.

A discussion of insects and diseases forms an important part of this bulletin, which is valuable to all those interested in grape-growing, and is free to those applying to the Department for it.

THE FARM BULLETIN.

Wet Haying in Nova Scotia.

Hay-making is still going on. The recent rains caused considerable drawbacks in hay-making, mainly through Eastern Nova Scotia. Sometimes the mornings would be fine and promising, farmers would get out in full force and mow down considerable hay, then suddenly the sky would darken and the rain come in showers. Much heavy hay and clover has been ruined.

Reports are coming from certain sections that the local showers and dark weather are causing blight on the potatoes, estimates at present that potato crop will be behind the average. Farmers at present should not complain, as the showers are putting new strength in every growing plant. Oats in many cases are over four feet in length, and have good heads. Roots and vegetables on some farms are ahead of last year's.

An English farmer, new to Nova Scotia, has certainly a good garden of vegetables, also excellent turnips. He is shipping barrels of turnips to the Sydney markets (Cape Breton.) The turnips are well shaped and fairly large. His garden is also clean as a whistle, using the common expression.

Milk, as always, is in good demand, and a good price, too. An old Antigonish farmer, who always looks on the bright side of things, showed the writer his milk cheque the other day, saying that the amount was smaller than last year's, but that he had lately sold the poor milkers out of his herd. With the money he intends to buy better milkers in the fall, also stating that his hay crop was better than last season, and he will have plenty of it.

Why is this man always so happy? The answer is short: He has a sober and steady-going son at home, who, like his father, is always busy, a good farmer, and who never thinks of leaving home for the cities or towns or foreign

countries to work in mean and also dangerous jobs, which is the way with too many young farmers, even when they are in their teens.

It is stated that eggs in Antigonish have not been nearly as scarce any other summer as the present. The demand cannot be supplied; even the price for eggs this summer is and was the best ever. The farmer could any working day during the summer come to town and sell his eggs for nineteen (19) cents per dozen in trade, and at present twenty cents per dozen. Years ago eggs were plentiful at six cents per dozen, and now scarce at twenty cents. Butter is also not over-crowded in the local stores, especially block butter: tubs are fairly plentiful. The market price is twenty cents per pound. It will likely be very high by fall and winter. J. M.

News Notes from Macdonald College.

H. Dasen has resigned the position of assistant in Bacteriology at Macdonald College, which he has held since the opening of the institution, and has become a practical farmer, having bought a four-hundred acre farm in Stanstead county, Quebec, which he hopes to make the center of a little colony of his fellow country-men, the Swiss. His successor is Wilfrid Sadler, a graduate of the Midland Agricultural College, Kingston, Derby, and a specialist in Dairy Bacteriology. He has written an excellent text book on the subject, entitled, "Bacteria as Friends and Foes of the Dairy Farmer."

To the position of Assistant in Physics, left vacant by the resignation of Mr. Bates, Dr. D. W. Hamilton, of Fredericton, N. B., has been appointed. Dr. Hamilton is a graduate of the University of New Brunswick, holding the three degrees of B. A., M. A. and Ph. D. He graduated with distinction in natural science, receiving the Governor-General's gold medal. He was for three years Principal of the Kingston, N. B., Consolidated School and has taught science in the New Brunswick Provincial Normal School for several years. Mr. Hamilton is much interested in agricultural science and is resigning a more lucrative position to get in closer touch with such work. As a correspondent his name is not unfamiliar to readers of the Farmer's Advocate.

In the Horticulture Department a new assistant has been appointed in the person of W. M. Aikenhead. Although of Canadian birth, Mr. Aikenhead has spent some years in the United States, where his father was engaged in market gardening. He is a graduate both of the Maryland Agricultural College and of the Ontario Agricultural College.

In the Animal Husbandry Department, Alex. R. Ness, youngest son of Mr. Robt. Ness, of Howick, and a graduate of the College, has been appointed assistant.

Alterations are in progress in the College stables. The drainage system is being rearranged, cement floors laid in the feeding stables and double ceilings built in the calf house, horse stable and feeding stable. The stables, which are of stone, have proved too cool for the stock in winter—especially for the calves—and it is hoped the double ceilings will render them more comfortable.

An experiment is being made with the hope of preventing the freezing of silage in cement silos. A second cement wall is being constructed around the main wall of one of the cement silos, leaving a four-inch air-space. The result will be observed with much interest.

The crops on the College farm are doing well since the August rains. The timothy yielded 2½ tons and the clover 2½ tons of hay to the acre. On August 15th the alfalfa is nearly ready for the third cutting and there is a good stand of second-growth clover, which will be cut for seed.

The Physics Department has three men out in different parts of the Province making drainage surveys. These men report a live interest in drainage problems and Prof. Lynde is receiving very appreciative letters from those for whom work has been done. Applications for drainage surveys are still coming in. Those who wish such work done should not defer sending in the application forms. Applications received now will be attended to this fall, if possible. Otherwise they will have precedence in the spring, when the Department will have a larger staff in the field.

Prof. Snell, of the Chemistry Department, and Mr. Cutler, Instructor in Cereal Husbandry, attended the sessions of the Graduate School of Agriculture at the Michigan Agricultural College in July. Prof. Snell also spoke at the meeting of the National Education Association in Chicago on "Chemistry and Household Science."

Crop Conditions Favorable.

A bulletin on the condition of field crops in Canada, compiled from data supplied by correspondents in all parts of the Dominion at the end of July, was issued the middle of August from the Census and Statistics Office, Ottawa. The bulletin states that good rains which fell generally throughout Canada during July had improved the outlook, and on July 31 the condition of all grain crops was favorable, with the exception of fall wheat in Ontario and Alberta, where this crop never fully recovered from the effects of the exceptionally severe winter. Fall-sown wheat represents, however, only a comparatively small proportion, viz., 7 p.c., of the total area under wheat. The condition of spring wheat is 83 p.c. of the standard for the whole of Canada; it is above 90 in the two extreme provinces of Prince Edward Island and British Columbia and between 80 and 90 in each of the other provinces, excepting Ontario, where it is just below 80, and in Quebec, where it falls to 70. Oats, barley, rye, mixed grains and flaxseed are all marked above 80 for Canada as a whole, and for each province except Quebec the range is between 80 and 90 and in certain cases even above 90. In Quebec the condition is lower, being between 70 and 80. Buckwheat in the Maritime provinces shows over 85; but in Ontario and Quebec the averages for this crop are respectively 75 and 73. Corn for husking is 70.87 and for fodder 73.19 for Canada, the condition being comparatively low in Ontario and Quebec, owing to the cold and wet weather of the early part of the summer. The condition of potatoes, turnips, mangels and other root crops is generally excellent, the figures being above 80 for Canada and either approaching or exceeding 90 in the Northwest provinces and in British Columbia. Only in Quebec are the prospects unfavorable, the condition being little above 70. Hay and clover crops are excellent upon the whole, Quebec being again the exception. The condition is especially high in the Northwest provinces and in British Columbia. Sugar beets are given as 77.17 in Ontario and 86.50 in Alberta. The Canadian crop situation at the end of July may therefore be summarized as generally favorable, giving neither exceptional promise nor the reverse. In Quebec the condition of all crops is below that of the other eight provinces.

A preliminary estimate of the yield per acre of fall wheat is 21.48 bushels as the average for the total effective area of 781,000 acres in the five provinces of Ontario, Manitoba, Saskatchewan, Alberta and British Columbia. This indicates a yield of 16,773,300 bushels, as compared with the final figures of 1911, viz.: 26,014,000 bushels from 1,172,119 acres. The average yield per acre of hay and clover is placed at 1.45 ton, giving upon an area of 7,633,600 acres a total production of 11,038,000 tons. Alfalfa, with an average yield per acre of 1.59 ton, shows an estimated total production of 177,300 tons from 111,300 acres. The first estimates of 1911 gave 12,694,000 tons hay and clover and 227,900 tons alfalfa.

The census of the manufactures of Canada taken last year for the calendar year 1910 as now compiled shows that the capital employed in manufactures increased during the decade by 178.58 per cent. and the value of products by 142.11 per cent. The number of establishments employing five hands and over last year was 19,202, being an increase of 4,552 in the decade.

ARCHIBALD BLUE,
Chief Officer, Census Branch.

Crops Good Along Lake Ontario.

It is not necessary to go to Canada's great Northwest to see abundant grain crops. Certain sections of the Province of Ontario have this year one of the best crops that the land has ever produced. From observations made from the train as it runs eastward from Toronto, the lake counties between Toronto and Belleville are this year producing a real "bumper." There is no indication of a shortage of bedding on most of the farms in these districts. Grain that was cut on August 17th was stooked or shocked (as we more often term it in Ontario), and, taking one field with another, seldom if ever have the stooks been seen to stand thicker on the ground. Most of the winter wheat and much of the barley was harvested, and the thick, coarse stubble shows it to have been a good stand. There were, however, many fields still out. Some of the oats were cut, and have stooked exceedingly well, but most of them were still standing and were badly lodged and tangled, owing to heavy rains and the weight of the crop. Some farmers were just finishing their haying, which has for the most part been a fair crop; while some report a large yield, others have not had such good returns from the land devoted to meadow.

A striking feature is the lateness of some fields

of barley and oats. Owing to the extremely wet spring, on the heavy lands in some of these counties seeding was very backward. So wet was some of the soil that certain fields were not sown until June, and a few until early July. It is surprising how these fields have come on. True, a few of them are not a good crop, but others, in which the grain was just commencing to head, promise, if frost does not interfere before they ripen, to give a good average yield. They have made wonderful growth, and no doubt are a much better crop than if the seeding had been done while the land was wet and cloggy in the spring. As a rule, the early seeding gives best results, but the soil must be dry. There are many limiting factors in crop production; all must be reckoned with and the condition of the soil at time of seeding, particularly with regard to moisture content, is by no means least of these.

The present heavy crop of straw, and the promised heavy yield of grain, properly handled and converted into good farmyard manure to be returned to the soil, will go a long distance toward winning more just such yields as are being harvested this year. A good crop means much to the soil as well as to the stock, and the returns to the farm should prove an incentive to put forth every endeavor to repeat and even exceed the yield in future years.

Equine Aristocracy at Cobourg

Situated on the shore of Lake Ontario, in the heart of one of the best farming and horse breeding sections in Ontario, and being also a thriving town noted for its beautiful summer homes and facilities to satisfy the mind of the most fastidious recreation seeker, Cobourg could not do otherwise than have a choice display of fancy horses at its annual summer show. For eight years now this show has gradually grown until it is recognized as one of the premier Ontario horse events of the summer. This year the show lasted five days, from August 13th to 17th inclusive, and as was expected, broke all previous records. The crowds on each day were greater than those of corresponding days of the best previous years, and the entry list far outdistanced those of former years, one class alone having thirty-four entries, and several brought out over twenty horses at the call of the bugle. This year new barns were erected to accommodate 140 horses. These barns are up-to-date in every particular, and the fancy entries are as comfortable here as in their own stables. This is a great improvement and one appreciated by the exhibitors.

Any admirer of natural beauty could not refrain from expressing delight at the grounds on which the show is held. All the stands are so placed that the seats are in the shade of monarchs of the primeval Canadian forest. There the spectator may sit in comfort and gaze at incoming and departing lake boats of all descriptions, and the great beauties which nature has lavished on the spot give way only to the farmer's love for his four-footed friend as he shows his paces, or poses before the judge. A steeplechase course is provided, which gives the public a full view of the races from the drop of the flag to the finish. Truly an ideal location for the horse and his admirers.

Special attractions this year comprised the band of the 48th Highlanders, Toronto, and the

Royal Canadian Dragoons in their ever popular musical ride.

Much of the success of the exhibition was due to the efforts of President J. D. Hayden, Vice-President Robt. F. Massie, Secretary John H. Davidson, and the very efficient Executive Committee.

Officiating judges were: Dr. F. C. Grenside, Guelph, Ont.; General Field, Buffalo, N. Y.; L. Waring, Plainfield, N. J.; Dr. Morgan, Kingston, Ont.; Dr. Sinclair, Cannington, Ont., and J. Fuller, Woodstock, Ont.

The prize list covered a wide range, there being seventy-five well-filled classes. Hunters and jumpers were out in strongest numbers, and the red coat races were keenly contested and eagerly watched by the crowds, which reached greatest numbers in the history of the show on Thursday, when over 5,000 paid admission. Fancy roadsters, ponies, stylish harness horses, hackneys, saddle horses and drafters made up the "bill of fare" which faced the judges, serving a type for all horse lovers.

The principal exhibitors were—in Harness Horses, C. W. McLean, Prescott; A. Yeager, Simcoe; Ennisclare Farm, Oakville; L. N. Bate, Ottawa; J. F. Staples, Ida; Burns & Sheppard, Toronto; A. R. Stephenson, Ogdensburg, N. Y.; Mrs. Viau, Montreal; in Hackneys, A. Yeager; Miss K. L. Wilks, Galt; C. W. McLean; in Roadsters, Miss Wilks; Ashley Farm, Foxboro; New Lodge Farm, Cobourg; W. J. Crossen, Cobourg; and several local single entries; Hunters and Jumpers, H. A. Tudhope, Toronto; Miss Grace Bell, Montreal; Hon. Clifford Sifton, Ottawa; Ennisclare Farm, Oakville, and Lt.-Col. H. C. Cox, Oakville.

Draft horses were not out in large numbers, but eleven good classes were forward, and competition was quite keen and interest never lagged. Some of the classes had ten entries and all were good individuals, mostly owned in the vicinity of Cobourg, which speaks well for the horse breeding industry of the district. In fact, local entries were a feature of the entire show.

Awards—Registered stallion, any age, 1, Mrs. George Cockburn, Baltimore, on Glenavon, by Baron of Buchlyvie; 2, New Lodge Farm, on Invarie Chief, by Hyacinthus; 3, Adam Watson, Cobourg, on King's Courtier, by Baron Miller. Foal of 1912, 1, T. A. Davidson, Cobourg; 2, Erwin Davey, Precious Corners; 3, Duncan Ferguson, Elmview. Yearling mare or gelding, 1, Hon. G. T. Oliver, on Prince, by McQueen; 2, H. McLaren, Cobourg, on Harry, by Victor Chief; 3, James Bray, Cold Springs, on Donald, by Tomick's Heir. Two-year-old mare or gelding, 1, C. J. McCarthy & Sons, Plainville, on Belle of the Maples; 2, Stanley Jamieson, Camborne, on Queenie, by McQueen; 3, Stephen Herrington, Roseneath, on Bess, by Dunure Baron. Light draft 3-year-old mare or gelding, 1, D. H. Taylor, Centreton, on Bess, by McQueen; 2, Oliver, on Nell, by Chancellor; 3, H. McLaren, on Nellie, by Pride of Scotland. Heavy draft 3-year-old mare or gelding, 1, McLaren, on Lady Chancellor, by Chancellor; 2, Thos. Davidson & Sons, Camborne, on Maggie of Springvale; 3, New Lodge Farm, on Ella. Breeding mare, any age, 1, McLaren, on Lady Chancellor; 2 and 3, Davidson, on Jess and Maggie of Springvale. Light draft team, 1, Oliver, on Nell and Jane; 2, Geo. Sanderson, Millbrook, on Molly and Dan;

3, Taylor, on Bessie McQueen and Lady McQueen; 4, P. W. Brown, Colborne, on Maud and Lark. Heavy draft team, 1, R. J. McKnight, Millbrook; 2, Duncan Ferguson, Elmview; 3, New Lodge Farm. Champion single drafter, 1, Lady Chancellor; 2, Bessie McQueen. Champion pair, 1, R. J. McKnight; 2, Oliver.

The champion hackney stallion was Miss K. L. Wilks' Crayke Mikado, who defeated Yeager's Brookfield Laddie and McLean's Evergreen's Forest Fire, two stylish horses. McLean got first and second in fillies.

In the harness classes, Earl Grey won first for Mrs. Viau, and I Wonder second for Yeager in class over 15.2, while in the class under 15.2, Yeager won with Eye Opener, McLean getting 2nd and 3rd on England's Pride and Eastern Star. Mrs. Viau's Sir Wilfrid and Earl Grey won the pairs over 15.2 and Eye Opener and I Wonder the class for pairs under 15.2. Mares or geldings, any height, were led by McLean's Eastern Star and England's Pride, with Lady Warwick and Lady Brantford second for Ennisclare Farm. McLean got first on tandems, and the Bytown stables, Ottawa, first in sporting tandems, while Yeager was first in unicorns and four-in-hands.

Miss Wilks' Niagara was first in the class for roadster stallions, she also getting first in the three-year-olds on Paronella Todd, and in the class over 15.2 on Maize. Crossen won the Walker Cup for championship with Molly Chimes, while Ashley Stock Farm was the other chief winner, although many local individual entries were well up in the money.

Hunters and Jumpers were altogether too numerous to attempt any individual report of the winnings. The best Canada has were there, including Confidence, the Olympia champion record-breaker, and the Viceroy from Cork, the high-priced gray wonder, from the stables of Ennisclare Farm, Oakville. Hon. Clifford Sifton had a string of 21 head out, and the other stables had their full quota. The challenge cup for the red coat race was won by R. F. Massie's Half-a-Crown, with Lyman Gooderham's Onaping second. The best Confidence could do in the 5-foot, "best performance" class was third, his stable mate, the oft-times winner, Hercules, winning, with Monty, from Ennisclare Farm, second. But he came back in great form in the championship class, breaking his own world's record by clearing 7 ft. 10½ in., amid a perfect storm of applause. While the sun slowly sank behind the trees on the west side of the horse-show park, and the people reluctantly prepared for their homeward journeys, the curtain fell on the "best ever" in horse shows at Cobourg.

A Wet Harvest.

The week-end rain which set in over Ontario on Saturday afternoon and evening, did nothing to ease the harvesting situation. Reports had already come from certain sections of fall wheat and barley cut and sprouting in the sheaf. A few days of fine weather last week had improved matters materially and held out promise of a successful harvest. It has certainly been a phenomenally wet August, and warm, dry weather is the earnest prayer. Prices of farm produce are tending upwards, 35 cents having been asked for eggs last week at Toronto on the St. Lawrence market.

GOSSIP.

A brown three-year-old Thoroughbred stallion, 16 hands 1 inch, that will make a good sire of Hunters, Saddle and Carriage horses, is advertised for sale in this issue by Dr. Wilson, 84 King street, London, Ont.

A BIG IMPORTATION OF QUALITY PERCHERONS.

R. Hamilton & Son, of Simcoe, Ont., the well- and favorably-known importers of Percheron horses, have arrived home from France with an exceptionally choice lot of Percheron stallions and mares. The many years' experience of this firm in the business of importing horses, and the many prizes won by them at the leading exhibitions, are too well known by the horsemen of Canada to need any comment. Their many importations have been up to a high standard, but every year shows a higher standard asked for, and demanded in this country, and the firm of R. Hamilton & Son have risen to the occasion in the lot just landed. They are an exceptionally choice lot, with a grand combination of big size, stylish tops, and faultless quality of underpinning. Many of them were winners at the top of big classes

at the great shows of Alencon and Paris, notably such big, flashy horses as the gray four-year-old, Islam [3031]. This horse won at both the above shows. He was approved by the Percheron Society of France, and had a big premium this year. Not many of his kind have ever found their way to Canada. Look him up at Toronto and Ottawa Exhibitions. Another noted winner at the big Alencon Show was the gray four-year-old, Ildebert [3028]. He is a remarkable topped horse, and just as good at the ground. There are three other four-year-olds, two of which are grays, the other a black, all of them big, toppy, stylish horses. Prominent among the three-year-olds is the Alencon winner, Janassa [3034]. He is a gray, put up with remarkable style of top, and stands on a grand quality of underpinning. He is a great horse, and has only to be seen to be admired. Judas [3036] is a black three-year-old, up to a very big size, a stylish, rangy horse, with beautiful underpinning. There are three other three-year-olds, all blacks, and all of the big, rangy kind that Canadians like. There is only one two-year-old, but he is a right good one. He was third at Paris in a big class. He is Kroupier [3037], a gray, up to a big size, and with quality all over. Hirumage [3026] is a black five-year-old, an im-

mensely big, rangy horse, up to a ton in weight, and clean as a yearling in his underpinning. He is a grand horse. Of the fillies brought out all were sold the next day after landing, except one, and she is a cracker, a gray three-year-old, Jouve [2993]. She was away up to the top at the Alencon Show, is immensely thick, smooth, and full of quality. Look these horses up at Toronto and Ottawa Shows. Not one of them but will go to the ton and over when developed and put in condition.

SALE OF NOTED SHORTHORN HERD.

One of the largest transactions in Shorthorn cattle taking place for some time in Canada is the recent sale by Geo. Amos & Sons, Moffat, to A. F. & G. Auld, of Eden Mills, Ont., of their entire Pleasant Valley Farms' herd, headed by the grand yearling bull, Broadhooks Ringleader and Nonpareil Courtier. This herd was never in better shape than at present, and will be seen at the leading shows this year. We wish these ambitious young breeders abundant success in their interesting project. They have lately sold to J. A. Watt, Salem, for R. W. Caswell, of Saskatoon, Sask., the grand yearling heifer, Crocus, one of the best ever bred by Messrs. Amos.

A GRAND LOT OF BIG PERCHERONS.

The old and reliable firm of Eaid & Porter, of Simcoe, Ont., whose long experience as importers, for many years of Clydesdales, but of late years of Percherons, has gained them a thorough knowledge of the requirements of the horse trade in Canada, exemplified in a striking manner by the very wide and extensive trade they have worked up, and the popularity of their annual importations among the horsemen of Canada, have just landed at their stables their 1912 importation of Percheron stallions. It is well known that with this firm big draft character, coupled with the clean, flat kind of bone, well-sprung pasterns, and big, wide feet, are the main points selected, and certainly in this lot they have excelled all previous records. A representative lot from their stables will be at Toronto Exhibition, and parties interested should make it a point to look them over. They will see something to admire in the massive French drafters that are gaining so rapidly in popularity in Canada.

Guest—"Look here; this mirror is so fearfully dirty that I can't see my face in it."

Hotel Servant—"It strikes me you ought to be thankful for that, instead of making trouble about it."

MARKETS.

Toronto.

REVIEW OF LAST WEEK'S MARKETS
At West Toronto on Monday, August 19th, receipts of live stock numbered 115 cars, comprising 2,215 cattle, 493 hogs, 794 sheep, 177 calves; trade dull for cattle; prices lower. Exporters, \$6.75 to \$7; choice butchers', \$6.50 to \$6.80; good, \$5.75 to \$6.25; medium, \$5 to \$5.75; common, \$4.50 to \$5; cows, \$3 to \$5. Feeders, 1,000 lbs. each, \$5 to \$5.50; milkers, \$55 to \$68; calves, \$3 to \$8.25. Sheep, \$3.50 to \$4.75; lambs, \$5 to \$6.40. Hogs, \$8.65, fed and watered, and \$8.25 to \$8.30 f. o. b. cars.

The total receipts of live stock at the City and Union Stock-yards last week were as follows:

	City.	Union.	Total.
Cars	129	237	366
Cattle	1,333	3,595	4,928
Hogs	2,521	2,794	5,315
Sheep	2,236	1,715	3,951
Calves	759	254	1,013
Horses	1	77	78

The total receipts of live stock at the two yards for the corresponding week of 1911 were as follows:

	City.	Union.	Total.
Cars	196	215	411
Cattle	2,340	2,066	5,406
Hogs	3,777	4,394	8,171
Sheep	2,921	980	3,901
Calves	293	139	431
Horses	1	44	45

The combined receipts at the two markets show a decrease of 45 carloads, 478 cattle, and 2,856 hogs; but an increase of 50 sheep, 582 calves, and 33 horses, in comparison with the same week of 1911.

Receipts of live stock at the Union yards on Monday were very large, greater than the demand called for on that day, but for the remainder of the week the deliveries were moderate. Trade in cattle was dull and slow all week, and prices are gradually declining from the late high levels. In all other classes prices were about steady, with the previous week's closing quotations.

Exporters.—Export cattle were from 20c. to 30c. per cwt. lower, and, in fact, there were only 150 cattle bought for export during the week. These were bought by Swift & Co., as follows: Steers, \$7 to \$7.40; heifers, \$6.75 to \$7; export cows, \$5.50 to \$5.75.

Butchers.—Butchers' cattle are gradually declining in price, and were about 25c. per cwt. lower than for the previous week. Choice heavy cattle of export weights sold at \$7 to \$7.25, and only one load brought \$7.40; good, \$6.75 to \$7; medium, \$6 to \$6.50; common to medium, \$5.25 to \$6; inferior to common, \$4.50 to \$5; cows, \$3 to \$5.50; bulls, \$3 to \$5.50.

Stockers and Feeders.—Steers, 800 to 900 lbs., sold at \$5 to \$5.25; stockers, 500 to 750 lbs., sold at \$4 to \$4.75.

Milkers and Springers.—There has been a steady trade in milkers and springers at prices ranging from \$40 to \$75 each, the bulk selling at \$55 to \$70.

Veal Calves.—The market remains strong for veal calves, and prices were firm all week, at \$3 to \$8.50; or an average of about \$6.75 per cwt.

Sheep and Lambs.—Sheep sold at steady prices all week. Light ewes, \$4.25 to \$4.75; heavy ewes and rams, \$3 to \$3.50; lambs sold at an average of \$6.60, or a range of \$5.25 to \$7, but few got the latter price.

Hogs.—Receipts were moderate all week and the bulk sold as follows: Selects, fed and watered, at \$8.60 to \$8.65, and \$8.25 to \$8.30 f. o. b. cars.

Horses.—There was a steady trade, at least the various sale barns so report. There were a good many buyers from out of town, from various parts of Ontario, at each of the sales, and we met several of them who informed us that good horses in the various classes sold at high prices, some heavy drafters selling up to \$275 and \$300 each. The general range of prices: Drafters, \$200 to \$275; general-purpose horses, \$175 to \$250; express and wagon horses, \$175 to \$225; drivers, \$100 to \$200; serviceably sound, \$45 to \$100.

BREADSTUFFS.

Wheat.—No. 2 red, white or mixed, 95c. to 98c., outside; Ontario fall, new,

85c. to 90c. per bushel; Manitoba No. 1 northern, \$1.12½; No. 2 northern, \$1.09½; No. 3 northern, \$1.06½, track, lake ports. Oats—Canadian Western extra No. 1 feed, track, lake ports, 42c.; Ontario No. 2, 41c.; No. 3, 40c., outside points; No. 2, 43c. to 43½c., track, Toronto; No. 3, 42c. to 42½c. Peas—No. 2, 90c., nominal, outside. Rye—No. 2 70c. per bushel. Buckwheat—70c. per bushel, outside. Barley—For malting, 80c. to 85c. (47-lb. test); for feed, 60c. to 65c. Corn—No. 3 yellow, 80½c., track, Toronto; at Collingwood, 79½c.; Midland, 78c. Flour—Ontario ninety-percent, winter-wheat patents, \$3.80 to \$3.85, seaboard; Manitoba flour—Prices at Toronto are: First patents, \$5.70; second patents, \$5.20, in cotton 10c. more in each case; strong bakers', \$5 in jute.

HAY AND MILLFEED.

Hay.—Baled, car lots, track, Toronto, \$12 per ton for No. 1. Straw.—Baled, car lots, track, Toronto, \$10 to \$10.50. Manitoba bran, \$22 to \$23 in bags; shorts, \$25; Ontario bran, \$23 in bags; shorts, \$25, car lots, track, Toronto.

COUNTRY PRODUCE.

Butter.—Choice creamery, firm. Creamery pound rolls, 28c. to 30c.; creamery solids, 27c. to 28c.; separator dairy, 26c. to 27c.; store lots, 22c. to 23c. Eggs.—Case lots of new-laid sold at 26c. to 27c. Cheese.—Large, 14½c.; twins, 15c. Poultry.—Receipts were a little larger, and prices easier. Spring ducks, alive, 12c. to 14c.; chickens, alive, 18c. to 20c.; fowl, alive, 13c.; old roosters, 10c. Chickens, dressed, 20c.; spring ducks, dressed, 16c. to 17c. Potatoes.—American potatoes sold from \$3.25 to \$3.50 per barrel, and Canadian potatoes, grown by market gardeners, sold at \$1.10 to \$1.25 per bushel.

FRUITS AND VEGETABLES.

Receipts of fruit and vegetables were larger than at any time this season, and prices went down accordingly. The prices given are per basket of 11 quarts unless otherwise stated. Raspberries are nearly done, but sold at 10c. to 12c. per quart; blueberries, \$1.50; red currants, 75c. to \$1; black currants, \$1.50 to \$1.75; Canadian plums, \$1 to \$1.50; peaches, 80c. to 90c.; apples, 20c. to 35c.; cucumbers, 15c. to 35c.; tomatoes, 25c. to 40c.; peppers, 40c. to 50c.; beans, 30c. to 40c.; peas, 50c.; marrows, 25c.; eggplants, 75c.; cherries, 75c. to 90c.; celery, \$1.25 to \$1.50; cabbage, 50c. to 60c. per dozen; California pears, \$2.50 to \$2.75 per case.

HIDES AND SKINS.

No. 1 inspected steers and cows, 13c.; No. 2 inspected steers and cows, 12c.; No. 3 inspected steers, cows and bulls, 11c.; country hides, cured, 11½c. to 12c.; country hides, green, 10½c. to 11c.; calf skins, per lb., 13c. to 16c.; lamb skins and pelts, 35c. to 40c.; horse hides, No. 1, \$3.50; horse hair, per lb., 35c.; tallow, No. 1, per lb., 5½c. to 6½c.

WOOL.

Unwashed, coarse, 18c. unwashed, fine, 14½c.; washed, coarse, 19c.; washed, fine, 21c.; rejects, 16c.

TORONTO SEED MARKET.

Alsike No. 1, per bushel, \$8.50 to \$8.75; alsike No. 2, per bushel, \$7.75 to \$8; alsike No. 3, per bushel, \$6.60 to \$6.75; alsike of fancy quality, equal to Government standard, would be worth \$9 per bushel.

Chicago.

Cattle.—Beeves, \$5.75 to \$10.30; Texas steers, \$4.90 to \$6.80; Western steers, \$6.25 to \$8.90; stockers and feeders, \$4.25 to \$7.30; cows and heifers, \$2.65 to \$8.15; calves, \$6.50 to \$9.75. Hogs.—Light, \$8.10 to \$8.70; mixed, \$7.70 to \$8.70; heavy, \$7.70 to \$8.70; rough, \$7.75 to \$7.80; pigs, \$6 to \$8.25; bulk of sales, \$8 to \$8.50.

Sheep and Lambs.—Native, \$3.20 to \$4.25; Western, \$3.20 to \$4.25; yearlings, \$4.30 to \$5.35; lambs, native, \$4.40 to \$7.10; Western, \$4.50 to \$7.10.

British Cattle Market.

John Rogers & Co., Liverpool, cable native Canadian steers making 14½c. to 14½c. per lb.

Montreal.

Live Stock.—In the local market the situation was not greatly changed. Receipts were moderately large, and demand fair, weather being hot and muggy and unfavorable to trade. Choice steers were quoted at 7c. per lb., while fine sold at 6½c. to 6¼c., and good around 6c., while medium ranged from 5c. to 6c. per lb., and common ranged down to about 4c. The canning stuff was obtainable at 3c. Calves sold at \$2 to \$7 each for the common, and up to \$12 for the good. Sheep and lambs held about steady. Old sheep sold at 4c. to 4½c. per lb., while lambs ranged from 5½c. to 6½c. The latter were in good demand, although there was no eagerness to secure the former. There was a fair supply of hogs, and everything was taken at 8½c. to 9c. per lb., weighed off cars, for best.

Horses.—Clmie received 100 Iceland ponies last week, for sale here. They came via London, and are said to be in good condition. They will be sold as quickly as possible, and prices are likely to range from \$50 to \$150 each, according to size and quality. Some of these Iceland ponies are excellent animals. The market for horses holds steady and firm, as follows: Heavy draft horses, weighing from 1,500 to 1,700 lbs., \$300 to \$375 each; light draft, weighing from 1,400 to 1,500 lbs., \$225 to \$300 each; light horses, 1,000 to 1,100 lbs., \$125 to \$200 each; and inferior, broken-down animals, \$75 to \$100 each. Choice saddle or carriage animals, \$350 to \$500 each.

Dressed Hogs.—The market for dressed hogs showed very little alteration, the range being somewhat narrower, at 12½c. to 12½c. per lb. for abattoir-dressed, fresh-killed.

Honey and Syrup.—Maple syrup sold at 7c. to 7½c. per lb. in wood, and at 70c. to 75c. in tins. Sugar, 9c. to 9½c. per lb.; demand not good. Honey, a little more interesting, and quotations about steady, at 10½c. to 11c. per lb. for white clover comb; 8c. to 8½c. for extracted, and 7c. to 8c. for dark clover comb and extracted.

Eggs.—Quality of eggs arriving anything but fine, it being difficult to obtain stock which is dependable. The harvest eggs will be coming along soon, when the stock ought to be fuller and better. Prices continue very high, being 23c. to 24c. for straight lots, and 21c. to 22c. for seconds, and 28c. to 29c. for selects.

Butter.—The market in the country was fractionally easier last week, and it looks as though prices had been boomed beyond a proper level a few weeks since. Purchases were made at 26½c., which means that some should be obtainable here at about 26½c. However, dealers are holding out for 26½c. per lb. for choicest, previous receipts having cost more than that. Fine stock may be had about ½c. less than the figures mentioned, while dairy butter is quotable at 22½c. to 22½c. per lb. A paltry 70 packages have been exported this season.

Cheese.—The market held firm, at 13½c. to 13½c. for finest Western colored, and ½c. less for white, 12½c. for finest Townships, and ½c. less for Quebecs. Exports of cheese to date are 850,000 boxes, against 895,000 a year ago.

Grain.—No. 2 Canadian Western oats sold, in car lots, ex store, at 45½c. per bushel; No. 1 extra feed oats, 45c. to 45½c. per bushel; No. 3 Canadian Western, ½c. less. Flour.—The market was steady, being \$6.10 per barrel, in wood, for Manitoba first patents, and \$5.60 for seconds, strong bakers' being \$5.10, flour in bags being 30c. below the above prices. Ontario winter-wheat patents were \$5.25 per barrel, in wood; straight rollers, \$4.90.

Millfeed.—No change in the market for millfeed, bran being quoted at \$22 per ton, and shorts at \$26 per ton, in bags. Middlings sold at \$27 to \$28 per ton, pure grain mouille being \$32 to \$34 per ton, and mixed mouille \$31.

Hay.—There was practically no change in hay last week, prices for pressed hay, carloads, Montreal, being as follows: No. 1 hay, \$18 to \$18.50; No. 2 extra, \$16 to \$17; No. 2 good, \$15 to \$15.50; No. 3 hay, \$13 to \$13.50, and clover mixed, \$12 to \$12.50.

Buffalo.

Cattle.—Prime steers, \$9.15 to \$9.50; butchers', \$5.50 to \$8.75; heifers, \$4.50 to \$5.50; cows, \$3 to \$6.50; bulls, \$4 to \$6.25; milk cows and springers, \$30 to \$70.

Veals.—\$4 to \$11. Hogs.—Heavy, \$8.90 to \$8.95; mixed, \$9 to \$9.05; Yorkers, \$8.75 to \$8.95; pigs, \$8.50 to \$8.75; roughs, \$7.60 to \$7.75; stags, \$5 to \$6.50; dairies, \$8.50 to \$8.90.

Sheep and Lambs.—Lambs, \$4.50 to \$6.75; a few, \$6.85; yearlings, \$5 to \$5.15; ewes, \$2 to \$4.25; sheep, mixed, \$3 to \$4.85.

Cheese Markets.

London, Ont., bid, 12½c. to 13½c.; Watertown, N. Y., 15½c.; Belleville, Ont., 13 1-16c. to 13½c.; Napanee, Ont., 13 1-16c.; Picton, Ont., 13c. to 13 1-16c.; Victoriaville, Que., 12½c.; Iroquois, Ont., 13½c.; Brockville, Ont., 13c. to 13½c.; Alexandria, Ont., 13 1-16c.; Kingston, Ont., 12 15-16c.

TRADE TOPICS.

A cement exhibit and free demonstration tent, by the Canada Cement Co., at the Toronto Exhibition, particulars of which are given in their advertisement in this issue, will be especially interesting to farmers, and those attending the exhibition should not fail to look up this important exhibit.

The Perfection seed and grain separator is advertised elsewhere in this issue by the manufacturers, The Templin Manufacturing Co., Fergus, Ont. A thorough cleaning separator is a valuable assistance in keeping the farm clear of weeds. The Perfection is said to be used exclusively on several of the Provincial Agricultural College farms, and has great screening capacity. Look up the advertisement, and write for free circular.

GOSSIP.

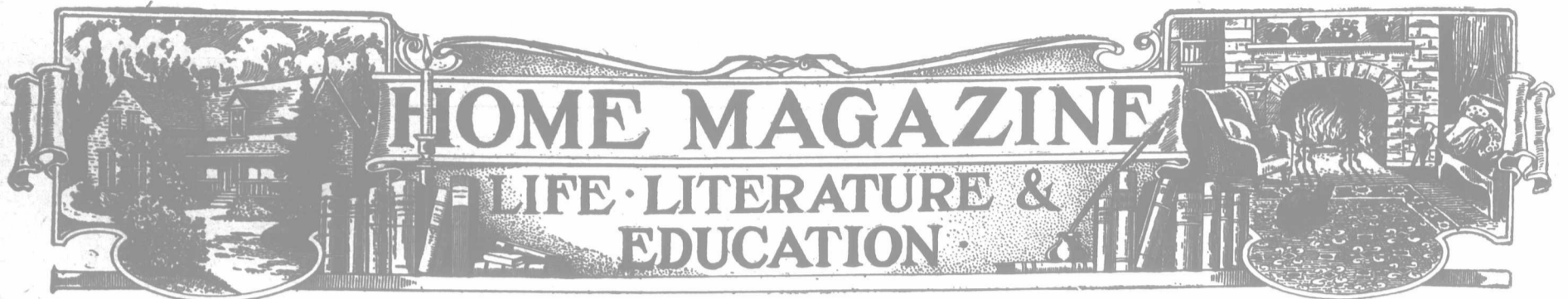
J. McKenzie, Willowdale, York County, Ont., in his advertisement, offers for sale Holstein calves sired by Sir Lyons Hengorfeld Segis, whose sire is King Segis, and his dam, Blance Lyons De Kol, has a record of 33½ lbs. Mr. McKenzie is also a breeder of Tamworth swine.

Dr. D. McEachran, Ormstown, Que., in his new advertisement, intimates that he expects to leave for Scotland about the 25th of September, and hopes to ship a new importation of Clydesdales the first week in October. He has recently sold to Warren Stringer, Dunville, Ont., two very choice two-year-old imported fillies.

The imported bay four-year-old Hackney stallion, Risplith Garton Duke (11574), a son of the champion, Garton Duke of Connaught, weighing about 1,200 lbs., and claimed to be the best Hackney stallion in the Maritime Provinces, is advertised for sale. Apply Box 600, Yarmouth, Nova Scotia.

SOME GRANDLY-BRED HOLSTEINS.

Of more than passing interest to Holstein-breeders and farmers engaged in dairying, is the advertisement of John A. Richardson, of Caledonia, Ont., in which he is offering for sale young bulls sired by his great stock bulls, King Johanna Kosnydyke, and Prince De Kol Posch. The former's dam, sire's two nearest dams, and eight of their sisters, have records that average 33.35 lbs. of butter in seven days, six of them being past and present world's champions. The latter is a son of the Guelph dairy-test champion for two years. These young bulls, sired by such richly-bred bulls, are out of official-record dams and their daughters. This is one of the oldest-established herds in Canada and has always had at its head the richest-bred bulls obtainable from the leading herds across the line, so that from an intensive line of breeding on heavy-producing lines, these young bulls are a most desirable lot. This new advertisement will only appear in a few issues, and a quick response is desirable from breeders requiring a choice herd-header.



The Women's Institute in Algoma, Ont.

By Miss Susie Campbell, W. I. Delegate.

My trip through Algoma as an Institute delegate was very enjoyable for many reasons. The inhabitants were cordial, and very hospitable. The farmers opened their homes and hearts, and every luxury was lavished upon delegates. Oh, the light, sweet homemade bread rises like a phantom in my sleep since my return; the cream and milk were pure—no adulteration—also the menu contained a wee bit of "Sir James Whitney's Lamb," and a nice relish. The air was bracingly cool, and sleep came each night without courtship. The scenery was beautiful; the Algoma mountains arrayed in their summer garb were marvellous to behold, and climbing to the heights and viewing the country over, I could not but exclaim, "Monarch of all I survey!" The valleys, with their rivulets and flowers, invited rest, coming in such close contact with nature. What lessons could be learned from nature's God!

The women of Algoma are alive to the work which can be accomplished by the Institute, and have girded on their armor, and, like true soldiers, are ever on the alert for some noble battle to fight. I found work going on in Algoma that is equal to any done in Old Ontario, and could see at a glance that the motto there was "Progress."

I find that the women have helped agricultural societies, sent money to the Sick Children's Hospital in Toronto, relieved widows by giving money for rebuilding after fire, and invited men to come to "bees" and do the work, they taking baskets and feeding the multitude of workers. Also, the women have made clothing for poor unfortunates. I have not met a more noble band of women than in Algoma. I was informed that the great market of which Sault Ste. Marie boasts, and not vainly, either, was started through the influence of women. To-day the farmers can sell more than they can produce.

A very nice feature in my trip was the large joint picnic held at Mr. Knight's farm, in the West Koreh branch of the Farmers' and Women's Institute. The day was perfect, the place ideal, and as I watched the large numbers of men, women, boys and girls, coming down the lane with such happy, beaming faces, I soliloquised, would this event ever have come to pass were it not for the "Institutes"?

There were lectures by delegates, the mayors of Sault Ste. Marie and Steelton, and others; then a happy, festive time.

An enchanting sight to me was when the mayor of the Sault, who brought 40 in his auto dray, gathered from different branches, invited 40 children to go for a drive before tea. As they sang, laughed, waved their flags and hied off for a ride, I stood and said to myself, "Am I in Algoma? This equals Old Ontario, and surpasses some parts of it."

Meetings in Algoma were well attended, and a number of Institutes organized, besides the addition of many new members.

The largest picnic was held at Day Mills, on the first of July, over 800 being present. As I looked into the faces of the boys and girls, I saw the future of Algoma imprinted there, and tried to impress on the parents that if the homes of Algoma were uplifted, there might be no fear for its future prosperity. The happy families coming in democrats, lumber wagons, buggies, and autos, meeting once a year at the "great picnic," went home contented and happy,

and with a vision of the future 1st of July, 1918. The various vehicles, from the harnessed oxen in lumber wagons, to the autos, were all very interesting, showing progress in science. The roads were excellent. The Government has done a very great deal for comfort and prosperity in spending money to make the Algomians have pleasurable outings. Listening to intelligent farmers, I heard many remarks such as this: "If the Government would loan the new settlers money at a low rate of interest, we would have braver hearts to clear up the land. When help is so scarce and wages so high, we become disheartened. Going into the woods alone is hard for one man; easy for two or more. When we have to pay high interest, we are old men by the time we have made a comfortable home." There is much truth in this.

Another remarked, "We cannot afford a draining machine; if one were sent to us our marshes could be easily drained, that is, if demonstrations were given. We are not slow of thought, but it is the money that is scarce."

In speaking to the Indians, the delegate said, "Plant potatoes." "Too dear," the Indian replied. "Sow wheat." "Too long growing. Can go out and work and buy 'bag flour' in short time." I fear the Indians' motto is followed by the white settlers,—make money faster by working for the Government on roads, or in lumber camps, etc. Algoma will not be brought to perfection as a farming country until the farmers have to depend upon farming alone for subsistence. The land in many parts will grow almost everything, and to great perfection, but the art of farming is very imperfectly carried out in many cases. The clover, so thick and high, growing along the roadsides,

Here is where a larger Government grant to weaker fairs would be beneficial. Let the strong look after themselves. New land has been purchased, and all feel anxious to succeed in making grounds and halls attractive.

We drove from the Sault to Goulais along the same road where, seven years ago, the lady delegate had to be tied to the seat of the wagon to prevent her from falling out. To-day, autos are flying over the hills, and reach the Bay in a short time.

Two large moose stood very majestically and faced us on the road, and without fear remained until we were almost in touch of them, when they scampered off into the thicket.

The character of the people in Algoma is shown by the large number of new schools which have been erected. The people have education at heart. I know they have better schools in some cases than in Old Ontario. Many of our meetings were held in these new schools, and the large play grounds which I noticed made me a little jealous. These play grounds, no doubt, will aid in developing the children physically, mentally, and morally.

Mr. Smith, District Representative of Sault Ste. Marie, is doing good work, and has been instrumental in introducing school fairs. Prizes will be given for vegetables, chickens, etc. I found that the children were very much interested, and saw some of the garden plots. This is the beginning of a good end.

I think I am not saying too much for the largest women's organization in Canada, the "Women's Institute," when I look into the future and prophesy that what the women are doing in Algoma to-day will leave a lasting impression on the next generation; that is, will help the inhabitants physically, mentally, and

air and balmy breezes, homemade bread, and cream and cheese."

The Windrow.

Yoshihito, the new Emperor of Japan, was born August 31, 1879, was educated at the school for the members of the Imperial family at Tokyo, and has served as Lieutenant-General in the army, and as Vice-Admiral in the navy. He married the Princess Sabako in 1900, and has three children. If they follow tradition, Emperor Yoshihito and Empress Sabako will not formally ascend the throne for a year.

The famous actress, Sarah Bernhardt, has consented to hand down her wonderful acting to future generations by means of the moving-picture machine. She does not even stipulate that the films will not be shown until after her death, for next winter, a historical play in which she takes the part of Queen Elizabeth of England, will be shown by a moving-picture company in America.

Miss Octavia Hill, a social reformer, who for a time assisted John Ruskin in his endeavors to bring about better conditions for the poor, died in London, Eng., on August 14th. She was the author of several books on social questions.

Those who declare, says the Daily News, that the literary woman is not domesticated, will find a living refutation of the assertion in Mrs. Burnett Smith, "Annie S. Swan," who is above and before all things a "home" woman. Her house (North Road House, Hertford, Eng.) bears witness to this. From the radiant, rose-tinted drawing-room to her own little white-walled study, almost Spartan in its simplicity, there is a dual atmosphere of spick-and-spanness and comfort which is very exhilarating. What I liked best was the Scotch bedroom, retained for the use of visitors from beyond the Tweed. The chintz curtains and coverings bristle with the most fascinating little purple thistles. "I had great difficulty in getting that pattern," said Mrs. Burnett Smith; "in fact, I had to get it made to order. When I asked in a shop in Edinburgh if they had a thistle pattern, the shopman said, 'Oh, no, madam, we don't stock anything so vulgar'—and this from a Scotsman, too! I simply said to him, 'Oh, you poor creature!'"

Laugh It Off.

When you can't make any headway,
And each day seems like a dead day,
And the thorns begin to pester till your
nerves are shattered, racked,
Stop a bit, get busy quaffing,
From the bottle labelled "Laughing"—
Get your fill and then start over—it's a
tonic, for a fact.

Are you grumpy? Are you faded?
Do you feel all worn and jaded
Every time some fresh work doth claim
you?
Have you lost the thing called tact?
Try a cup of sunny chaffing,
Sweetened up with merry laughing;
It's the best thing on the market for a
tonic, for a fact.

Let us fold away our fears
And put by our foolish tears,
And through all the coming years
Just be glad.



An Up-to-date Schoolhouse in Algoma, Ont.

This is a great improvement on many of the schoolhouses in Southern Ontario.

seemed wasting for want of cattle to eat it. What a country for the sheep industry, and lamb so expensive; also for cattle, and yet some poorer grades are being fed. No buyers are going in for cattle, but if there were co-operation in raising cattle, buyers would soon purchase.

Taking everything into consideration, Algoma bids fair to progress rapidly. I met many from Old Ontario, and all united in saying, "Give me Algoma in preference to the East," and their contentment was a very marked feature.

The Institutes are doing excellent work in bringing hundreds together, and not only discussing improvement, but receiving new ideas. I met many women who are interesting themselves in fairs, and the men are doing their best to have the fall exhibitions a success,

morally, and that the home-life will be an important factor. Before closing, allow me to congratulate Lee Valley Institute. It was organized one year ago, and we had our meeting in a "new hall." The women have been instrumental in raising funds for a two-story building, not quite finished. But what a feeling of pleasure and pride those Lee Valleyites had as they said, "See our new hall! We are not going in debt, pay as we go, and hope to have it finished and up-to-date next time you delegates come back."

What an influence those women will wield over Lee Valleyites' amusement and sociability, and what buried talent will be brought out!

Upon arrival home in extremely hot weather, 11th July, my song was, "Let me back to Algoma, to enjoy her cool

Hope's Quiet Hour

Meet for the Master's Use.

Let every one that nameth the name of Christ depart from iniquity. . . . If a man therefore purge himself from these, he shall be a vessel unto honour, sanctified, and meet for the Master's use, and prepared unto every good work.—2 Tim. II., 19-21.

St. Paul, in this connection, speaks of the numerous articles needed in a great household. Some of these are made of gold or silver, others of wood or clay, but all are needed by the Master. So, in the Church, which is the Household of God, each one—young or old, rich or poor, educated or ignorant—is needed by the Master. The various circumstances, which make one life so different from another, are not accidents of fate. As Browning suggests, we are like clay in the wheel of the Divine Potter, who knows exactly the kind of vessel He wants us to become, and is steadily working towards that special end. It is faithless folly and rebellion to murmur and complain over little trials or great sorrows. The Master makes no mistakes and is intensely interested and absolutely careful over your perfecting.

"He fixed thee 'mid this dance
Of plastic circumstance,
This Present, thou, forsooth, would fain
arrest:
Machinery just meant
To give thy soul its bent,
Try thee and turn thee forth, sufficient-
ly impressed."

Why should you feel that you are unjustly treated if you are called to work hard with your hands, while another person has the chance to earn his living in a way which seems to you very easy—or perhaps has no need to earn his living at all? If everyone were forced to do farm work all the time you would have no books or newspapers, no pictures, carpets, furniture or china, no telegraphs, telephones or machines of any kind. If no one did farm work the world's population would starve. If no one had leisure and money to spare there would be little chance of thinking out great problems in literature, art, theology, science, etc., and little money to pour out lavishly in carrying out great enterprises—philanthropic or national. Certainly no one is intended to be a drone, doing nothing for society; but, as the body would suffer greatly without eyes—which seem to have an easy time, yet are necessary to the comfort, safety and general welfare of the man who lives in the body—so the world would suffer terribly if everyone were forced to work early and late to earn a comfortable living. The thinkers have a chance to inspire and help millions during their earthly life, and uncounted multitudes during the centuries that follow. The Master wants some of His servants to work with their brains, and some with their hands. The important thing for each of us is to keep ourselves always in readiness for His work, "sanctified and meet for the Master's use."

There is no chance in our position. Each one is called to do the work for which God has particularly fitted him. He Who calls each one of the millions of stars by name, yet has time to think of every tiny sparrow, has declared that His children are more precious than many sparrows, and that even the hairs of their heads are of value in His sight. Is it likely that He will give needless pain to those who are dearly loved, or risk any unnecessary strain which may injure one of us in body, mind or spirit? But if we are to be meet for the Master's use, we must, as our text declares, be cleansed and made beautiful with the glorious beauty of holiness. A cup made of common clay may be transformed into precious china, and glass may be cut so that it reflects the light like a diamond. Let us work with the Master trustfully, submitting without a grumble to His discipline, and obeying His orders without demanding to know His reasons and plans; then we shall not waste our time and His, but every day will add a little to our perfecting.

We have certain natural qualities which are talents our Master has committed to

our trust, to be used for Him and for our brothers and sisters. The moment we begin to grow conceited about them, or fancy they belong to us, and that we have a right to squander them on our own selfish interests, we are wasting them—wasting and injuring our Master's property. A beautiful woman may use her sacred talent of beauty to inspire others with high ideals, or she may drag men by that dangerous gift down to awful ruin. A man may use riches and intellect for the good of the world, or he may waste them utterly and defeat the purpose of God. Cleverness is not the secret of success; it often leads to disastrous failure. A clever boy is apt to neglect his lessons and receive only a superficial and flimsy education; a clever man may be shallow, conceited and weak, doing little or nothing but slip easily through life.

Whatever special powers you have—and we all have special gifts of some kind—never look down on other people because they are without them. God lent you what you needed for the particular work He has given you to do, and you are unfaithful to your trust unless you are doing His work according to His directions.

Do you think that the commonplace work of Monday or Saturday is less ennobling and important than the teaching of a Sunday-school class or a visit to a sick person? If the Master has set you the task of washing on Monday, or scrubbing on Saturday, the fact that He is using you makes the commonplace work glorious. The washing and scrubbing will have to be done again another day, and it may seem to you as though no lasting result came from all your hard work. So might a tree think that its leaves, which waved cheerfully all summer, and then dropped off to die in the winter, had done no real and lasting good. But they did their appointed work, and the tree gained life and power from their unnoticed drinking in of sunlight, air and rain.

You were cheerily blacking a stove last week, singing over the dirty job, and now the stove needs cleaning again. Was last week's work thrown away? Certainly not. It is built into your character, and you are a little more lovely in the Master's sight, more meet for His use in the great work of lifting mankind nearer to God.

You were kind and forbearing in manner, and loving in thought towards a fretful, selfish person yesterday. You may have forgotten it, but God is using your bright face and kindly words to attract that other weary heart to His own. You are a little nearer the perfection He desires to see in you, and He

has been able to use you as a polished instrument to do His work.

Or perhaps you have been fretful and selfish, sharp in speech or rude and unkind in manner or action. Then you have failed Him when He wanted to use you, and have done serious harm to the cause you would like to help. The day which seemed so ordinary was big with opportunities and possibilities. You have used or wasted them, and the good or evil done in your own or other lives LASTS. You may say lightly that the past is gone, and perhaps you think that nothing very important for good or ill can have resulted from ordinary days or weeks. Browning says:

"Fool! All that is, at all,
Lasts ever, past recall;
Earth changes, but thy soul and God
stand sure:
What entered into thee,
That was, is, and shall be;
Time's wheel runs back or stops;
Potter and clay endure."

Perhaps you are called to endure a really great sorrow. The Master does not explain why this is—He must have good reason for His silence. How glad He is when you trust Him and take up the cross with the cheerful endurance of a hero, instead of lying down in a huddled-up heap under it, with your face turned sulkily away from every possible gleam of sunshine which may find its way into your darkness. One you love has been lifted out of your sight. Can't you keep in touch with him through the Master, Who is holding His hand and trying to clasp yours? Is there no one left on earth to love? While love is reaching out in prayer and service, no outlook can be utterly dark and hopeless.

Have you pain of body, heart or spirit to endure? The Master was perfected through sufferings (Heb. ii. : 10), and we must either willingly endure hardness as good soldiers of Jesus Christ, or miss the perfecting which will make us clean and holy, meet for the Master's use. God can never be satisfied while any of us are moderately good Christians—He is longing for our perfection. His object in watching over our lives is not to make us comfortable, but good. Those whom the world calls failures may have lived gloriously successful lives, and those who are envied as rich and famous may be saddening their loving Father's heart by disastrous failure.

The Master cares about our success or failure. Nothing is trivial or unimportant when it concerns us. He weighs every trouble and every duty, never giving us one grain more than is needed for our perfecting. The other day I read in the paper that, in weighing radium, a

microscope has to be used to see the tiny weights used. Be sure, the Creator of radium is not behind His children in minute exactness.

Our business in this world is not to grow rich, famous or popular, and then die and leave behind everything we have so hardly won. That would be saddest failure. Our business is to grow daily more pure and holy, in heart and in outward life, so that we may carry joyously through the mysterious door of death all that we have gained in our passage through this wilderness, and may be prepared for the higher work our Master is planning for us in the wonderful Promised Land. Does your life seem dull and profitless? You can have no conception of what it is worth to God. Can you bear to disappoint Him?

DORA FARNCOMB.

The Ingle Nook.

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

Dear Ingle Nook Friends,—Aren't you glad, whether Conservative or Liberal in your leanings, that the Ontario Government has decided to throw the weight of its power into an endeavor to stamp out tuberculosis, from one Province at least? It takes strenuous measures to conquer the White Plague, and just as long as nothing strenuous is done the disease must go on spreading, with all the suffering it causes to the patients themselves, and all the agony to their friends.

According to the new regulations, it appears, each medical practitioner will be compelled to report to the Provincial Board of Health, within twelve hours after discovering it, any tuberculosis case within his district. Afterwards, he will be required to report weekly on the progress of the patient. In the meantime the Board of Health will at once forward to the patient and his family, printed instructions regarding care and treatment of the patient and prevention of infection or contagion from the disease. In cases where the patient cannot be isolated enough at home, the Health Officer may order the patient to be removed to a sanitarium, the expense, when he is indigent, to be borne by the municipality. This provision, however, is probably intended to apply more especially to crowded city districts. There are practically no country places in



King George and Queen Mary Visiting the Sick.

which, by the use of a floored tent, the patient may not be kept at home, instead of being subjected to the home-sickness of going away. If the other members of the family take care to follow directions implicitly, to "use their heads" in the matter, and to observe the scrupulous cleanliness of the trained nurse in all their dealings with the sick one, there is surely no reason that the disease may not be prevented from spreading, nor yet that the patient may not have as good a chance of recovery as in any sanitarium. Where nursing is not intelligently carried out, of course, the Health Officer who may order the removal is wholly justified.

.....

Aren't you sometimes amused at the influence which partyism has over men who should know better than to have their best judgment swayed by it? I notice by this morning's paper (I am writing this on August 10th), an item which states that the British Government has expressed a hope that the question of naval defence may be removed from the sphere of party politics in Canada. Now, don't shudder.—I am not going to launch into a disquisition on the naval question.—The point that is tickling my risibilities is this, that any Government should find it necessary to make such a request. The very doing so emphasizes the truth that all we women know (since we cannot vote we may be as unprejudiced as we choose!) that nine men out of ten (is that too large a percentage?) follow party like sheep.—Throw common sense to the winds! Pull the wool over your eyes! Bury out of sight your best judgment! Trot obediently after party! . . . Don't think—above all things, don't think! Swear that black is white! Believe that everything brought out by your own side is by order of the archangels, everything on the platform of the other side an arrangement of the nether regions!—Be one-sided,—whatever you do, be one-sided! Talk the other fellow down by mere harangue, or else sit in stolid silence listening with deaf ears and a palisaded judgment! Don't read both sides of the question! For mercy's sake don't do that! You might get a little light somewhere if you did!—Now, isn't this what nine men out of ten, and a few women who pride themselves on being politicians, "act"?

What an awful thing to be BORN to party. And, just think of it, had all of these been born on the other side, they would have been just as explosive, just as stubbornly in favor of the very things they now condemn.

And so, because the world of politicians is so "muchly thus," whether, as I have said, Conservative or Liberal, the British Government finds it necessary to suggest that this great question be taken out of politics. Verily, methinks, it would be well were a great many questions taken out of politics.

.....

And now, to turn to more quieting matters: It always seems to me, when I return from holidays, that I have a great deal to write about that particular small section which has always been to me home. True, the most conspicuous object within its immediate confines is just a small country village, but then, we must remember, Thoreau was able to say that he had "travelled a great deal in Concord," so why may not the rest of us find it possible to do the same thing within a similarly small area? There is so very much to see in the country, even in a weed-grown ditch, if one has caught the secret of using one's eyes.

.....

My sister and I spent just one afternoon botanizing, back at the beaver-meadow by the river. True, there are no beavers there now, nor have there been any for the past fifty years, but the name still clings, and no doubt will so long as there are any descendants of the original settlers in the neighborhood. But if there were no beavers, there were plenty of other interesting things among the long grass by the river. Of plants that we did not know, we were able to identify a sort of loose-strife which rejoices in the "unrememberable" scientific name of *Lysimachia terrestris*, a beautiful little bush of

meadowsweet with pinky-white flowers, a sort of mint, and one or two others.

Some people say, "What's the use of knowing anything about botany?—You can enjoy the flowers just as well without knowing their names." But I am sure that all of you who know enough of the study—and so very little is required—to enable you to trace most of the common plants down and find out their names, both common and scientific, will agree with me that there is a real pleasure in being able to do so. Your trip to the swamp has an object; it is a voyage of discovery, as well as an opportunity for happy loitering and "inviting the soul." The little knowledge that you have seems to give you so many extra eyes. You begin to notice dozens of the less conspicuous plants that would have escaped your observation entirely, had you not known something of "botany." Don't be afraid of the word. It represents nothing very terrific.

And then the relationships among the plants are so curious. Is it not really interesting to find out that the strawberry is cousin to the rose, and the nettle to the elm?—that the climbing clematis belongs to the same family as the little anemone or wind-flower?—that the bloodroot is really a poppy, and that the nasturtium is a close relative of the troublesome wild mustard in the fields? Impossible as it may seem, there are resemblances that establish these, and even more wonderful relationships.

Then, too, a very slight acquaintance with the plants, in this way, serves to enable one, in a very short time, to be ready at recognizing weeds that are troublesome, so that one may have some idea as to which require to be fought, tooth and nail.

.....

Really, it seems to me, all farm folk would be just the better of knowing even an inkling about, yes—botany. But, if one has never learned anything of it, and really has not the time to devote even a half-hour occasionally in becoming acquainted with it, there is still a chance to know something about the plants. The Government weed book, which may be obtained from the Experimental Farm at Ottawa (price \$1.00), contains pictures in color, with name, description of, and methods of eradication of all the troublesome weeds. There are similar books on the wild flowers, with pictures, common names, and easy descriptions, intended for those who do not care to take up botany minutely. I shall be glad to give the names of these books, to anyone who may wish to know them.

.....

And now, after this digression, back to our riverside again. Beside the new (to us) plants mentioned, my sister and I saw, that day, several old friends, most of them, oh, so beautiful! There were a few wild roses in bloom, and among them, straggling up among the tall grass, some spikes of the velvety crimson-cardinal flower, a feathery showing of the lovely white meadow rue, and some pinky-purple clusters of swamp milkweed. Farther on were masses of white boneset, or thoroughwort, almost in bloom, as were also the many heads of its sister, the pinky-topped Joe Pye weed. The old herb doctors, you know, set great store by the curative properties of these two plants, the latter of which received its name, indeed, from an old New England Indian doctor who is said to have cured typhoid fever by its use.

.....

On past the river and up into the pasture land, but even there the wonders did not cease, for here was a clump of pearly everlasting, or "immortelles," with white flowers and downy leaves; there was another of yarrow, used in some parts of England for weaving bridal wreaths; while up on a knoll beyond grew a whole colony of St. John's Wort, with its yellow flowers. This flower derived its name from an ancient superstition that on St. John's day, dew that had fallen on it was good to preserve the eyesight. It was, therefore, collected, mixed with oil, and made into a balm especially good for sore eyes. The plant was also gathered on St. John's eve, to be hung at doors and windows, and, in Scotland, was even

carried about in the clothing as a safeguard against evil spirits and witchcraft.

.....

Admire any of these plants that I have mentioned as much as you choose. Not a single one of them is "dangerous." Made for beauty, it would seem, they are. I have not mentioned any of the noxious weeds, because we did not see any of them back there by the riverside that day, and anyway I don't want to talk about troublesome plants just now, but only about some of the sweet "wildings," which help to make those who love them feel that there is so very much in this green world to make life worth living.

I don't know who wrote the following, but it is very pretty, is it not?

"Over in the swamps life is gay and free; for why should they be dull when they may be merry, or why should they throw but sparingly their bloom when their soil tells them to send it out abundantly? In its time and place each lovely flower unfolds; the turtle travels slowly back from the nearest pond; the blackbirds pipe and the oriole matches the tint of his wing with the petals of the marigold. Grave willows have a feathery care of the sweet community, and, although King Carnival pass up and down, disorder never reigns."

.....

Now, to something more practical, for, you know, there are a few folk who think all talk about merely beautiful things just twaddle, and we must try to have something for all.

One thing that struck me greatly while on my visit to the country was the intense interest which the farmers' wives whom I met have in their gardens. And really the gardens do look very well this year; so much rain has been the very life of them. Such cabbage! Such beans! Such lettuce, and beets, and carrots, and vegetable-oyster! The corn and tomatoes only have suffered somewhat, but they are the tropically-inclined among the horde; they need the hot sun to coax them to their best endeavors.

I can imagine few sights more pleasing to one who loves the country and all that "in it is," than to see two or three farmers' wives walking up and down the garden of one of them and "comparing notes."—How interested they are!—How many things there seem to be to tell!—What a pardonable pride in their faces, as they make way through the lush green rows!

It is wholesome conversation, this that takes place among the cabbage and bean rows. There is no gossip about it. On the contrary, there is a great deal that is instructive about it. I have heard a few city people (please don't think I mean all city folk, for there are many very nice people in the cities; I refer merely to the members of certain sets, whom you may have met, and whose remarks need not hurt you), talk lightly about the "narrowness of range of conversation" in the country, but I always smile inwardly, even when I think it worth my while to launch a serious protest, on hearing such comments. Surely talk about the wonderful growing things, which respond so readily to care, and yield such a good harvest of nourishing food, is quite as elevating as that about Mrs. Golightly's bridge party or afternoon tea, the latest show, or the latest fashion in dress or hair arrangement, topics which make up a goodly share of the conversation of the sets that I have mentioned.

I have heard some city folk say, too, that "the country is so gossipy." Don't you ever believe that there is any difference. City folk gossip quite as much as country folk, and, although there is a praiseworthy city fashion abroad that taboos pronouncing unkind opinions at the parties and teas as "bad form," it is wonderful how much news that might better have been left untold, manages to disseminate itself at these same parties. . . . By all means, in preference, let us talk gardens, and chickens, and cows. Perhaps the truth of the matter is that we all, whether in country or town, need to guard against unkind gossip a little better than we do.

.....

During the past summer I read two very interesting books on gardening—

books that were partly story, partly practical, and wholly delightful. I want to tell you something about them, but—dear me, how our space has run away! I shall have to wait until another time.

JUNIA.

To The Women's Institute

I have a little announcement to make to you to-day. For a long time I have thought that we should devote a special corner to the Women's Institute. A long time ago it was suggested to us that we should be the "organ" of the institution, but we were obliged to refuse, partly because of space considerations in the Women's part of the paper, partly because it is against the policy of this journal to be the especial organ of any one association.

There is no reason, however, why we should not help the Women's Institute to the extent of regularly publishing their papers,—at least as regularly as possible. A motto of the Institute in many places is, "If you know a good thing pass it on," so surely the chance to pass on a number of good things to our 30,000 subscribers, and probably 150,000 readers, counting subscribers' families and others, is one that will satisfy those who wish to reach a large audience.

We shall, then, be pleased to receive for publication, any papers read at Women's Institute meetings, which have been found helpful. For the use of each of these we will be pleased to allow the writer one year's subscription to our journal, or, in case of those who are already subscribers, one year's extension of subscription. We will also return the original MS. if so requested. Kindly send all such papers to me, and I will see that the rest of the business is attended to.

JUNIA.

AN ALTRUISTIC PLAN.

Dear Junia,—The interesting time I last spent in your cozy corner has remained a pleasant memory with me, therefore I have come again to spend another evening at your cheerful fireside. But, dear Chatterers, this time I come with an appeal. When looking over the "Women's Page" in one of our leading dailies recently, I read an article, which, I believe, should claim our special attention. It stated that in the city of Montreal alone, during the last spell of hot weather, there were eighty children buried in one day. A large percentage of these deaths were those of babies, most of them being children of the slums. I presume our other home cities have suffered also, although perhaps in a lesser degree. Now, does not that present a very deplorable condition of affairs? I wonder if we, in our pleasant country homes, could not do something to alleviate the suffering of our poorer city sisters and their little ones? If we would each invite a mother with her babe to come and spend a couple of weeks in our country home, away from the city dust and noise, during the more intense heat of the summer, that the mother might have the benefit of fresh air, fruit, pure milk, etc., and that they both might escape the glaring heat in the unsanitary slum districts. Might not this help greatly to lessen mortality among the little ones? We who are members of the "Women's Institute" should remember that motto, "For Home and Country," and then consider if we may not be serving both home and country by making a vacation in the country possible to at least a few of these overworked mothers and suffering babes. Wishing your Department every success.

WINNIFRED M. AUGUSTINE.
Lambton Co., Ont.

Layer Cake.

Mrs. D. M., Lambton Co., Ont., asks for a reliable recipe for layer cake, also for one for skimmed-milk cheese, or cheese made of sour cream or milk.

The following recipe, which has often been given in this column before is, I think, the most reliable I have ever found. Try it. Beat together 1 cup butter and 2 of sugar, next beat in 1 cup sweet milk, then 3 beaten eggs. Last of all, beat in 3 cups flour in which have been sifted 1 teaspoon (rounded) of cream tartar, and $\frac{1}{2}$ teaspoon soda.

Three rounded teaspoons baking powder may be used instead of the soda and cream tartar, if preferred. Beat the batter quickly until smooth, and bake in two thick or three thinner layers, in a moderate oven. If the oven is too hot the top will harden over too soon and the cake will not rise nicely. Be sure to take the cake out the moment it appears done when tested with a clean whisk-broom straw, as it dries out if left in the oven even a little too long.

Put the layers together with jelly, or any kind of filling you prefer. If you have made it in two thick layers, split each in two, when cold, with a bread-knife, and then put all together in four layers, with custard or filling between. Finally, ice the top. This is a rather large cake, but it will keep well for a week in a cool place. Keep it in a tin box, well covered.

I have a recipe for whole milk cheese, but none for one made with skimmed milk. Perhaps some reader will be kind enough to contribute a method for the latter. Here is one for making cheese with slightly sour milk. To make this cheese, 2 per cent. acid should be present in the milk. Procure rennet tablets or scale pepsin from the drug store and follow directions, which may differ with different preparations. Usually the milk should have a temperature of 83 degrees when the rennet tablets or extract is added. Let stand until the curd has become firm enough to cut clean, then cut it into cubes about 1/2 inch in diameter. Next set the curd gently in motion and raise gradually to a temperature of 98 degrees F. In an hour and a half from the time the rennet was added, the curd should be firm. Now draw off the whey at once and drain the curd, cutting it into blocks so that the whey can drain out. In an hour or more the curd will have matted so that it will tear in a distinct grain. It should now be cut into small bits, cooled to 80 degrees, and salted. When it becomes mellow again, put it in the press and press firmly for at least twenty hours. Finally, when it is taken from the press, put it in a room where the temperature will not exceed 65 degrees, to cure. Turn the cheese every day and rub it. When it is two weeks old, paint it with melted paraffine to prevent moulding. It will be ready for use in two months, but may be left longer if a more highly-flavored cheese is preferred.

For whole milk and cream cheese see article abridged from Henry E. Alvord's bulletin on cheese-making at the end of the department.

VERSES FOR CHILDREN—SCONES.

Dear Junia,—I am about to ask a request quite out of the common, but I know you must be almost always expecting the unusual. I think I have read that you have not room for verses, but I often see verses in the Beaver columns, and sometimes in Hope's, and other places. Could you give a few bright, lively, interesting little verses for children, between the ages of two and five years, to recite? Also the names of a few nice songs?

Would you kindly send recipe for scones?
EVELYN E.
Brant Co., Ont.

Perhaps some of the mothers who know baby jingles will help you in finding some for the little tot of two. Here is one for a start:

"Pick-a-pack-a-poo!
Now I lace my shoe!
Here an eyelet, there an eyelet,
Sir, how do you do?"

Here are a few for the five-year-old:

THE BOWL OF A TEASPOON.

"Look in me sideways,
You'll laugh from ear to ear;
Look in me lengthwise,
You'll scare your mother, dear.
Fat man! Lean man!
Oh dear, how very queer!

If the little lad looks in the bowl of a silver teaspoon as he learns this he will catch the point of the rhyme.

MOTHER'S KISSES.

"I don't mind bumps or bruises now,
'Cause I have learned to tell
That mother dear will kiss the place,
And that will make it well.

MY PUSSY CAT AND I.

"My pussy cat 's not made like me,
So pink and smooth and soft;
Her clothes are fastened on, you see,
And never can come off.

"Her toes are not like mine at all;
They're fuzzy like her skin;
All rolled up in a tiny ball,
With crooked pins stuck in."

If you watch the Junior Beaver's Department you will often find bits of rhyme suitable for recitations for very small children.

Here are some recipes for scones:
Sweet Milk Scones.—Mix 2 heaped teaspoons baking powder with 3 cups flour. Add 1 tablespoon sugar and 1/2 teaspoon salt, and quickly rub in 1 tablespoon butter. Add milk to make a stiff dough, mixing it in with a knife. Cut the dough in two and pat out into two scones, 1/2 inch thick. Mark with a knife as though cutting pie, cutting most of the way through, brush with milk, bake on a greased pan in a very hot oven 15 minutes.

Scotch Scones.—With 1/2 lb. flour mix well by sifting 1/2 teaspoon salt, 1/2 teaspoon soda, 1/2 teaspoon cream tartar, 1 teaspoon sugar. Make into a soft paste with buttermilk, handling as little as possible. Roll very quickly, cut in small cakes, and bake on top of the stove, turning when necessary. Do not grease the pan.

PROTECTING VINES FOR WINTER.

Would be glad if you would give me some advice through your valuable paper as to the care of a clematis vine, also the baby rambler, through the winter months. They are planted at the east side of a house. We live near Lake Huron, in Bruce County.

Does the clematis die down each year? Should the rose be taken down and completely covered?
Bruce Co., Ont.

SUBSCRIBER.

There are several species of clematis, some of which are more hardy than others, the large-flowering kind—Jackmanii, for instance—requiring more care than the small-flowered "paniculata" variety. During the first winter it is safer to winter the large-flowering species in a frost-proof cellar. All clematis vines are, however, the better of winter protection, even when grown. This may be given by binding old sacking or straw over the vines. The clematis does not die down each year, but is often severely trimmed back by the frost.

Perhaps you may be pleased to hear what the noted horticulturist, Prof. L. H. Bailey, says in regard to growing the clematis.

"To grow clematis most successfully, they should be given a good depth of loamy soil, with a fair supply of well-rotted manure spaded in and thoroughly distributed through the soil. In hot, dry weather, the plants should be regularly watered in order to obtain the greatest number of flowers possible, for the plants are very susceptible to injury by drought. A point of great importance, especially in caring for newly-set plants, is to provide a firm support for them to climb upon. A solid wooden or metal trellis is preferable, for the reason that it prevents the plants from being whipped about by the winds, which often results either in breaking the stalks just above the ground, or else in cracking the outer bark of the stalks and rendering them more liable to the attacks of insects and fungous diseases. Training the vines upon strings, or a pliable support of any kind, is not to be advised for this reason. Propagation of the hybrid varieties is effected both by cuttings and by grafts. All of the type varieties grow rapidly from seed."

How many of you have brought roots of the wild variety to grow by your verandas? The flowers are not so showy as those of the large-flowered purple and white varieties, but many people consider them much more beautiful.

I know a beautiful rambler rose in this city that is protected every winter by binding straw about its stems. As it grows over an arch, this is easily done. As, however, Bruce County is so much farther north than London, you might

more safely take the vine down. I will quote you what Mr. William C. McCollom says in his book on vines.

"Ordinarily, to protect tender-wooded plants from winter-killing, we must cover the tops in some manner. Straw can be used for this purpose. . . . I have also seen canvas stretched across a vine to save it; but the best method is to take the vine down, lay it out very carefully, making sure that none of the branches are bent very much and apt to break, then cover the tops with leaves, stable litter, or soil. The number of supposedly tender plants that can in this way be grown in this north-temperate latitude will astonish you.

REMOVING TAN.

Dear Junia,—Could you kindly publish, through your valuable paper, how to remove tan from a person's flesh? Also what will cure dark flesh? Thanking you in advance.
BROWN EYES.
York Co., Ont.

The question was answered on page 1293, and again on page 1295 of July 18th issue. Kindly refer back to that issue.

SILVER MESH BAG.

Dear Junia,—Would you please tell me in your valuable columns how to clean a silver mesh bag, or pocketbook? Thanking you in advance.
Kent Co., Ont.

If your bag is of real silver, the following, given by Scientific American, will clean it: First wash the article in a solution of 1 fluid ounce of liquid potassa in 20 fluid ounces water. Rinse, then immerse in a mixture of salt 1 part, alum 1 part, saltpetre 2 parts; all dissolved in water 4 parts. Let it remain for 5 minutes, wash in cold water and dry with chamolis.

If the chains are just plated, as those of most of the silver mesh bags are, the purse may be cleaned by rubbing it with a paste made of alcohol and whiting. Brush out well with a soft brush to remove all traces of the whiting.
MARGUERITE.

STAINS—TOMATO PLANTS, ETC.

Dear Junia,—Will you kindly answer the following questions through "The Farmer's Advocate":

How can tan canvas shoes be cleaned? Would the tan polish used for leather be any use?

Since reaching the age of about twenty years, I seem to have the tendency to turn in my toes when walking. Do you know whether this could be cured? I am very anxious to get a remedy for this distressing and disfiguring habit. Kindly send suggestions.

I got some tea stains on a cream serge coat. Someone advised me to pour boiling water through the stain, but this did not altogether remove it. I should like to know whether it could be perfectly removed.

Could you let me know which branches of tomato plants should be cut off? When should these be removed?
Huron Co., Ont.

Your question re tan shoes was answered recently.

The only way of curing "toeing-in" is to watch persistently, for a time, that the habit is not indulged in. The toes should be turned outward at an angle of 45 degrees.

Scientific American says to remove a tea stain from white woollen goods in this way: Wet the spot, then apply a solution of potassium permanganate. Remove the brownish blotch that remains with sulphurous acid, then wash out. As this method is given for "white" goods, it is just possible that the spot, after treatment, may be left pure white, but you could easily color it by applying a little yellow-ochre water, testing it first to get the exact shade.

Sometimes tea stains may be removed by rubbing the spots with butter. Let stand a while, then wash out with hot water.

In regard to your question about tomato plants: French, in his book on vegetable growing, says, "Pinch off the ends of the vine and side shoots if the plant is growing too fast without setting fruit. At about the first of September, pinch off ends and all blossoms, so that the fruit already set shall be

matured. Pick all fruit as soon as ripened, whether needed or not." Ruthless slashing off of leaves, such as some people practice, is not recommended. The leaves are really the breathing organs of the plant.

HOSPITALS.

Dear Junia,—May a new-comer take a peep into your helpful corner? But I am coming for help. I am very fond of the Ingle Nook, also Hope's Quiet Hour; one gets so many helpful hints.

Would you be kind enough to publish, through the Ingle Nook, the names and addresses of some of the hospitals in the States of Maine, Vermont, New York, Massachusetts, and New Hampshire, that a girl might go and train for a nurse. Thanking you in advance.
Moose Creek, Ont.

HONORA.

Very excellent hospitals are St. Luke's, New York City; The Presbyterian Hospital, New York City; The Massachusetts General, Boston; Boston City Hospital; and if you care to go farther South, the Johns-Hopkins Hospital, Baltimore, Md. Nearer hospitals, in New York State, are the General Hospital, Buffalo; General Hospital, Rochester; General Hospital, Yonkers. I do not know anything of those in Maine, Vermont, or New Hampshire, but letters addressed to the General Hospitals at the capital of each State would be sure to reach them. The capitals are, as you no doubt know, Maine—Augusta; New Hampshire—Concord; Vermont—Montpelier.

WEDDING QUERIES.

Editor "The Farmer's Advocate":

Dear Junia,—Wishing for a little advice, I thought my best plan would be to write to "The Farmer's Advocate," as we have already received some valuable information. Dear Ingle Nook, would you please give me some good suggestions for a noon wedding, something simple, but tasty? Would a cold meal be all right for noon? I am very scarce of help, and for this reason wish to make it as easy as possible. Would potato salad and cold ham, a variety of pickles, and something for dessert, do for about fifty guests? I would be pleased to have an answer as soon as possible. Would an auto veil be enough for trip to station? Hoping to hear from you soon, and thanking you in advance.
NOVA SCOTIAN.

Nova Scotia.
You really do not need to have an elaborate menu at all. I think we should strive to bring simplicity, and yet more simplicity, into everything connected with the country. Let the city folk wear themselves out, if they want to, in running after style; we do not need to.

The menu you suggest would do very nicely. For a sweet, you might have some nice ice cream or a fruit salad and cake. It would be better for the bride to wear her travelling hat to the station. Unless she went there in an automobile, when an auto veil might be needed to keep off the dust, a less obtrusive veil would be preferable, say one of the color of her hat, tied up closely at the back, with no ends flying.

HOMEMADE CHEESE.

A very valuable bulletin on cheese-making (Farmers' Bulletin No. 166), has been issued by the U. S. Department of Agriculture at Washington. The method given is, briefly, as follows: The best time to start the cheese is immediately after milking. First pour the milk from one vessel to another to aerate it well, doing this in a place where the air is pure and fresh, then pour it into a large wash boiler. If you wish a cheese of high color, use about a teaspoonful of cheese coloring to 16 gallons of milk, mixing it first in a little separate milk.

Now add 1 ounce rennet extract for every 12 gallons of milk, mixing the extract first with half a dipper of cold water. If rennet tablets are used, one small tablet for every 5 gallons of milk, or one large one for 25 gallons will be required. These may be obtained from any drug store or dairy-supply house.

The milk should be at a temperature not lower than 86 degrees F., nor above 90 degrees F. when the rennet is put in. Test it by a thermometer (Fahrenheit).

After the rennet is put in, stir the milk gently two or three minutes, then let stand until the curd is firm enough to cut. The curd will be ready for this when it breaks clean across the finger. Now cut it lengthwise, then crosswise, until it is in cubes about the size of small kernels of corn. If only a few cheeses are to be made, a wire toaster may be used for this. Next stir the curd gently for about three minutes, then heat slowly to 98 degrees F., stirring all the time while the curd is being heated. Keep the curd at this temperature for about 40 minutes. To tell when it is cooked enough, take a small handful, press it gently, hold it for a moment, then open the hand. If it falls apart it is firm enough. When cooked enough draw off the whey.

Now put the curd into the mould by handfuls, pressing it in well until well rounded up. The cheese should be from 8 to 10 inches in diameter, and about 3 inches thick. When pressed down firmly, take the cheese out of the mould, turn it upside down, then replace it and put on the heavy weight. Any vessel with small holes in the bottom will do for the mould, and a pail containing a few stones will do for the weight. Do not apply the full weight at first.

Let the cheese remain a few hours in the press, then take it out and dress as follows: First put it in warm water for a moment, then wipe dry and smooth. Take a piece of thin linen about six inches wide and long enough to go around the cheese and lap over a few inches. Wrap this smoothly about the cheese, put a circular cap of cloth on each side, then replace the cheese in the mould and put on the heaviest weight. Leave for about 20 hours, then take out and salt.

The cheese may be either dry salted or brine salted, but the latter method is the better. Make a solution of salt and water as strong as it can be made. Put the cheese on this, and sprinkle some salt on the exposed surface. Leave for 2½ days, turning the cheese over every 12 hours. Next put it on a shelf in the cellar to cure. Turn it and rub it with the palm of the hand every day for a week or two, then twice a week until the curing is complete. While curing, wipe the cheese occasionally with a cloth dampened in warm water. The temperature best for curing is from 55 degrees F. to 65 degrees F., with the air as moist as possible. The cheese will be ready for use in from two to four months.

ENGLISH CREAM CHEESE.

Pour very thick cream into a linen bag and hang up, with a basin beneath to catch the whey, in a cool room or cellar in which the air is pure. When the whey is partly drained off, twist the bag tightly and tie a string around to dry the curd more. After from 24 to 48 hours, the "cheese" is ready to eat, and may be made into small moulds. Before long a recipe for French Cream Cheese, for which rennet is used, will be given.

The Boy of the City.

God help the boy who never sees
The butterflies, the birds, the bees,
Nor hears the music of the breeze
When zephyrs soft are blowing.
Who cannot in sweet comfort lie
Where clover blooms are thick and high,
And hear the gentle murmur nigh
Of brooklets softly flowing.

God help the boy who does not know
Where all the woodland berries grow,
Who never sees the forests glow
When leaves are red and yellow.
Whose childish feet can never stray
For such a hapless boy I say
When Nature does her charms display—
God help the little fellow.

—Nixon Waterman.

"What were you and Mr. Smith talking about?" asked her mother. "Oh, we were discussing our kith and kin," replied the young lady. The mother looked dubiously at her daughter, whereupon her little brother, wishing to help his sister, said, "Yeth, they wath, mother. I heard 'em. Mr. Thmith asked her for a kith, and she thaid, 'You kin.'"

The Beaver Circle.

OUR SENIOR BEAVERS.

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

A New Competition.

Dear Beavers,—How would you like to do something nice for somebody else, for your next competition? You know we should all try not to be selfish, and to do things for other people whenever we can. Now, two or three of you have asked if you may have a story competition some time, so here is our plan: We will give prizes for the most interesting stories written for our Junior Beavers. You must not copy the stories from any other paper, but must make them up, plan and all, in your own heads, and must tell us that you have done so when you write. Please don't forget to do this, or you may lose a chance of winning a prize. Write about anything you please, little girls or boys, a cat, a dog, a bird, a camping-out experience, or a fairy story, but be sure to make an interesting story about whatever you choose. We have some nice prizes here waiting for you. Send the stories so that they may reach this office not later than September 15th, and be sure to address them to "The Beaver Circle," "The Farmer's Advocate," London, Ont.

Senior Beavers' Letter Box.

Dear Puck and Beavers.—Surely you must have forgotten me by this time, for I have not written to the Beaver Circle for nearly five months. We surely must have wakened up half of the Beavers, for such a lot entered the Garden Competition. That's what you like, isn't it, Puck? Puck, did Bessie Deans enter the Garden Competition this year? My garden is lovely this year, and I will soon be ready to take a photo of it, but I must ask you a question: All of my flowers are out except the gladioli and asters. Would you advise me to take the photo now, or after they come out. The reason why I asked you this question is because the other flowers will be over by the time my gladioli and asters come out. My tomatoes are not ripe yet, though they are pretty large. I wish Puck could see my garden now, for everything is so nice. Puck, would you please try and answer this question this week. Wishing the Beavers ever success. Good-bye. A. HALSTEAD.
Cashtown, Ont.

Yes, I like to know that the boys and girls are making gardens. Even those who do not succeed in winning prizes will have learned so much, and will have had so many nice bouquets to decorate the house with, and to give away to friends and sick people.

You little gardeners will soon have to

can tell me what this is in the packet I am sending you. I was going through the bush the other day, and I hit a rotten stump, and went to pick it up and there I found this grub. Is it a grub? I have never seen anything like it. What a lot of legs it has, and such a hard shell, too! What does it live on, leaves or insects?

FRANK MORTON (age 14).
Rosemont, Ont.

The odd-looking brown worm that you sent in the box, Frank, arrived safely, and still alive, indeed very much alive. One of the men in the office downstairs got it to take to his little girl, who is very much interested in such things. He left the box on his desk, and when he went to get it—Mr. Grub was gone! It had crawled out, and is down there now somewhere, among the papers, if it hasn't starved to death. Don't you imagine the jump one of the typewriter girls will give if she comes upon it? But it is very harmless, after all. It is a millipede, or thousand-legged worm. Occasionally these worms feed upon growing plants, but as a rule they live in damp places and feed on decaying vegetable matter.

Dear Puck,—As I wrote once before and saw my letter in print I thought I would write again. I wrote for the Fourth Book this year and passed. Puck, would you please tell me what number I am in the Gardening Competition? I have my garden pretty well cleaned up now, and the things are all growing fine. This spring we had a kind of a competition at school. We had to find a lot of different kinds of birds, and tell the size of them and all about them and their nests. I enjoy nature study very much. As my letter is getting long, I will close.

ELIZABETH F. HUGHES
(Age 12, Book IV.)

Your number in the Garden Competition is 21, Elizabeth. How did you study the birds?—By sitting very still until they came near?—or with field glasses?

Dear Puck and Beavers,—I received my prize, which is a bird book, and am very well pleased with it, as I am a bird lover, and it is just what I want. I intended to write and thank you before this, but we have been busy with the haying and I haven't had time, so you will have to excuse me. As I am bringing home the cows to-night, I saw three cranes going in a south-westerly direction. Do you think they were migrating south, or is it too early?

I am busy at my garden now, as some of the flowers are beginning to bloom. Well, I think I will close now, as it is getting long. Wishing "The Farmer's Advocate" every success, I remain,

HOMER FITZGERALD.

St. Ives, Ont.

P. S.—I would like to correspond with boys of my own age, or near it—13.

It is just possible that the cranes, or herons, were migrating southward at the time when your letter was written. Some of them nest as far northward as Hudson's Bay. Use all your influence, Homer, to keep boys from shooting these fine birds. They are fast becoming extinct. Indeed, all country boys should league together for bird-protection. A French scientist has estimated that if all of the birds in the world were to die out, the earth would be uninhabitable, in the short space of nine years, because of the enormous increase of insect pests. Birds eat millions of insects. Take care of them, all you can.

Dear Puck and Beavers,—This is my first attempt to write your Circle, but as I have just got through reading your letters, I could not resist the temptation of writing a letter myself.

I live about a mile north of St. Thomas. My father works a two-hundred-acre farm. We are raising eighteen calves, which are doing very well. We also milk twenty-two cows. We separate our milk and sell our cream in the city. We have just got through drawing in seventy loads of hay, which seems very good. We have yet to take off fifteen acres. (Written July 29th.)

We have cut and nearly ready to draw in, thirteen acres of rye. Besides this,



"Apple Turnovers are Really Nice."

Will O' The Wisp.

A marshy meadow—a quiet pond—
A lonely road—and a hill beyond.
In the reedy marsh below the hill,
On starlight nights when the air is still,
Where rushes and cresses grow green and crisp,

There goes, dancing, Will-o'-the-Wisp,
Will-o'-the-Wisp so gay.

We see the gleam of his lantern bright
Flitting about in the quiet night.
He balances on the cat-tail tops,
Then to the rustling reeds he drops,
And needs to the rushes will softly lisp.
"Here comes, dancing, Will-o'-the-Wisp,
Will-o'-the-Wisp so gay."

The east grows gray at the touch of dawn.

Presto! Will-o'-the-Wisp is gone,
For the morning wind blows out his light—
He'll dance again on another night.
When crickets are chirping in grasses crisp,

Then we'll watch for Will-o'-the-Wisp,
Will-o'-the-Wisp so gay.

—Cecil Cavendish, in St. Nicholas

get the photos of your garden taken, will you not? They should be at their best now.

Yes, Bessie Deans entered the competition, and is, no doubt, working hard to have her garden a good one. I know of one little girl near this city who hurries home every night from school to hoe and weed in hers.

Have the picture taken when the showiest of the flowers are out, whatever they may be. Asters take well, especially the white, light pink, and mauve ones.

Write good long letters about your gardens, Beavers. Tell about all the plants you grew, and how you grew them. It would also make your letters more interesting if you told about any birds, toads, insects, etc., that you may have noticed while working. Be sure to state, too, that you did all the work yourself, except, perhaps, the first plowing, etc. I should like to have all the Garden Competition letters and photos in by October 15th, at the very latest.—Puck.

Dear Puck,—I am writing to see if you

we have twenty-three acres of barley, and fifteen acres of oats.

The corn crop does not seem very good this year, as it was so dry when planted, but is picking up since these last few rains.

I will send you some riddles. Why are a rooster's feathers always smooth? Ans.—Because he carries a comb.

Around the house, around the house, and only leaves one track. Ans.—A wheelbarrow.

What is the nearest tie on earth to men? Ans.—His neck-tie.

What nation is most likely to win in the end? Ans.—Determination.

HARRY ZAVITZ (age 12, Sr. IV.), St. Thomas, Ont.

Dear Puck and Beavers,—As I have read a great many interesting letters in "The Farmer's Advocate," I thought I would write one, too. We have taken "The Farmer's Advocate" for a number of years, and we would not like to be without it. I go to school every day. Our teacher's name is Miss Stewart. We all like her very much. There are about forty pupils going to our school. I have about a quarter of a mile to go to school. We live on a farm of about 100 acres, four miles from Kincardine. The railway runs through our farm. We often see the train. I will close now, wishing the Beaver Circle success. I hope to see my letter in print.

RIDDLES.

There are two sisters of equal size, one sits inside, the other outside. Ans.—A looking-glass.

FRANCES M. HARRISON, Kincardine, Ont.

Dear Puck and Beavers,—This is my first letter to the Beaver Circle, although I have been a silent reader for over a year. My father takes "The Farmer's Advocate." I live on a farm of about one hundred and forty acres. I am very fond of birds. Last Tuesday when I was in town I saw a sparrow with four legs. It only had use for two, and the other two slid along behind. The hind ones projected from the backbone. It was quite a curiosity.

I go to school at Largie, which is about three miles and a half from home. I walk every day. Our teacher's name is Miss Whittlock; she was just engaged a while ago.

I would like Florence J. Murray, Lakeside, Ont., or some of the other Beavers to write to me.

Well, I will close, hoping that this will escape the w.-p. b., and wishing the Beaver Circle every success.

AGNES KERR (age 13, Jr. IV.), Dutton, Ont.

Dear Puck and Beavers,—As this is my first letter to your Circle I will not make it long. I have three brothers, but I am the only girl. My father has taken "The Farmer's Advocate" many years, and we all like to read it. We did have a lot of sheep, but have sold nearly all of them. We have a little black lamb which stands up on its hind legs and eats apples off the lower branches of the apple trees, and we have a little colt; his name is Duke, and a calf named Mollie. I have a pair of white rabbits, with pink eyes, and my brother has an old pair and a lot of young ones. I would like if some of the members of my age, 12 years, would correspond with me.

Marion Birch, Renton, Ont.

Dear Puck and Beavers,—This is my first letter to the Beaver Circle, and I would like to join it. My father has taken "The Farmer's Advocate" for a number of years, and likes it fine. I go to school nearly every day, but we are getting our summer holidays now. I live a mile and a half from school.

For pets I have a dog and a calf. I call the dog Foxie and the calf Violet. I guess I will close now, as my letter is getting rather long. Hoping it will escape the w.-p. b. Yours truly,

WALTER EVANS (age 14, Sr. IV.), Tottenham, Ont.

OUR JUNIOR BEAVERS.

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

The Cautious Cat.

By D. K. Stevens, in St. Nicholas.

A Cautious Cat
And a Reckless Rat
Went to sea with an Innocent Lamb;
They sailed in a yawl
With nothing at all
To eat but a sugar-cured ham.
The wind blew high
In a sky-blue sky,
At a rate they had never foreseen,
The wind blew low,
And the wind also
Blew a little bit in between—
Just a little bit in between.

Said the Cautious Cat
To the Reckless Rat,
Likewise to the Innocent Lamb:
"We'll tack this smack
And sail right back
To send a Mar-coni-gram.
For the winds might blow
Both high and low,
And I wouldn't care a Lima bean,
But I never can sail
When the ocean gale
Blows a little bit in between—
Just a little bit in between.

milk to the cheese factory, and I go for a ride every morning. I have for pets two rabbits and a cat.

I started for school last May, and I am going when school starts again. We are going to have a new school-house. My teacher's name is Miss Perry.

Will say good-bye to the Beavers now, wishing you every success.

RALPH R. McLEOD, Penobsquis, N. B.

Dear Puck and Beavers,—This is the first time I have written to your Circle, and I would like to join it. My brother has taken "The Farmer's Advocate" for two years, and would not do without it. I like reading the letters, and was tempted to write to you. I go to school nearly every day. I am in the Junior Third Class. I like going to school very much. It is a red brick building. I live on a farm and like it fine. I have three sisters and one brother. I have a good time picking berries in summer. I guess I will close, wishing the Beavers every success, and hoping my letter escapes the waste-paper basket.

GERTIE FELKER (Age 11, Jr. III. Class), Grimsby, Ont.

Dear Puck and Beavers,—My father has taken "The Farmer's Advocate" for

every success, and hoping this will escape the w.-p. b.

ROSE RICE, Brice Hill, Ont. (Age 9, Sr. II.).

Beaver Circle Note.

Two Junior Beaver letters had to be thrown in the w.-p. b. because they were written on both sides of the paper. The printers can't use them very well when written that way.

Hospitality.

By Clara I. Brewer, in N. Y. Independent.

The most famous man of his age, in his long 'Oriental journeys, used to pass the home of a "great woman." "And as oft as he passed by he turned in thither to eat bread. And she said to her husband, 'Let us make a little chamber on the wall, and let us set for him there a bed and a table and a stool and a candlestick.'" When this was done, the illustrious guest "turned into the chamber," to the delight of the generous hosts. In return, the good man showed the warmest appreciation of their hospitality, making no complaint as to smallness of the room or the scantiness of the furniture.

In our own day we have witnessed the passing of that delightful phase of the old-time family life called hospitality. Perhaps many have been all unmindful of its departure, but some familiar, elusive flavor of life seems lacking. The smack of something hearty and wholesome and satisfying is gone.

Hospitality has given place to entertaining, which is a vastly different thing. Hospitality is a perpetual charm of a genial home. Entertaining is an event—an occasional opening and decking the house for a function—then a lapse into family solitude. Entertaining is like an electric illumination turned on for a brief glare and then turned off. Hospitality is a kindly star shining with steady beam.

One cause of the decline of hospitality arises from the efforts of many misguided folk to transplant it from its natural habitat to the unfriendly soil of a club. "My husband belongs to two clubs and my son to three," said a woman recently, "and we do not have any company at our house any more. We invite them to a club instead—it is so much less bother." It may be less bother; the club may possess a score of advantages in appointments and service and cuisine; but it must always come far short in one particular, which to right-minded people outweighs them all—it is not a home.

One charm of hospitality is that it dares to be delightfully spontaneous, even haphazard. Some one is picked up and brought home to dinner; or called by telephone Sunday night and urged to come for muffins and new maple syrup; or the neighbors are summoned by the message that the wood fire is just at the stage for popping corn. The person who is afraid to be unconventional will never taste the sweetest joys of hospitality. I have often asked people to come to breakfast for sausage and buckwheat cakes, and no one has ever refused.

Where true hospitality exists every one is at ease, and therefore at his best. The timid find their tongues and talk. Under the spell of the genial atmosphere they even venture to be witty. "When I am at the Davenports," said the little mousy woman in gray, "I am a surprise to myself. I can talk so easily and can always think of a reply, or an apt story. I come away so satisfied with myself, feeling I am really clever." In the practice of successful hospitality people are judiciously let alone. Most women fuss over their guests too much. If they choose to talk, well; if they prefer to be silent, pray do not force them to talk. If they want to depart, allow them to go without those insistent efforts to detain which many think a manifestation of hospitality, but which are really a great bore, akin to the perils of blockade-running in the Civil War.

One formidable obstacle in the way of exercising hospitality arises from a false notion that things are necessary; things to eat, things to look at—carpets, furniture, silver, glass. "I can't invite any one until I get a new dining-room rug." "Our parlor chairs are too shabby to have any company." "I'd like to ask them, but I am not strong enough to get



Hurry Up!

"Of course, with me
You will never agree,"
Said the Cat to the Rat and the Lamb,
"But if you balk,
You will have to walk—
That's the kind of a kitten I am!"
So they sailed right back
On the larboard tack,
To the nearest port of call,
And the Reckless Rat
Let it go at that,
While the Lamb said nothing at all—
Said nothing—whatever—at all.

Junior Beavers' Letter Box.

Dear Beavers,—My daddy takes "The Farmer's Advocate," and I like to hear the Beaver letters. I am a little boy six years old, and have a little sister sixteen months. We think she is very cute. I live on a farm and we take our

about ten years. I enjoy reading the little letters very much. I have one brother; he is eleven years old. I go to school every day. I passed from Part Second to Second.

For pets I have a cat and four little kittens, and a horse. The cat's name is Tweetie; the horse's name is Kate. My letter is getting long. I will close, hoping this will escape the w.-p. b.

EDITH SHELLINGTON (age 9), Harley P. O., Ont.

Dear Puck and Beavers,—I live on a farm. We raise a great deal of poultry, horses, cattle, sheep, and pigs. I have a horse; I call her Doll. I live two miles from the school. I walk in summer, but I get a ride in winter. I went to school nearly every day before holidays, but I am enjoying my holidays. I will close, wishing the Beavers

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T. D. ELLIOTT, BOLTON, ONT.

When Writing Advertisers, Please Mention "The Farmer's Advocate"

up a big dinner." Hospitality not only does not depend upon these things, but it is something far removed from them. Indeed, its finest flavor is often found amid the plainest surroundings, since they who have beautiful homes may be filled with a pride of possession utterly incompatible with true hospitality.

If one desires to make hospitality famous, it is not necessary to plan elaborate menus or conjure up novel dishes. When people are away from the madding crowd, where they dare to be honest and natural, the majority will confess to a fondness for plain, hearty food. You know that dainty little Miss Spirituelle, who looks as if she fed on butterflies' wings and humming-birds' tongues. Most women bring on a nervous headache when they are to entertain her by trying to think up some dainty to tempt her manifestly delicate appetite. Would you guess that when I want to bring her to our house I have only to telephone that we shall have beefsteak smothered in onions? And did you know that when Blank was a member of a not remote Cabinet, he would sometimes say to an old friend who lived in a little box of a house on And-so-forth street: "Harry, if your wife can have a boiled dinner to-morrow night I'd like to come out. I haven't had anything good to eat since I was at your house last." If you are a woman longing to make your home a popular place and not knowing quite how to do it, can you not, by dint of patience and intelligent effort, learn to make some one thing so well as to create a reputation for it? It does not matter in the least what it is—chicken pie, or gingerbread, or baked beans, or corned-beef hash. Any woman can so absolutely master one thing that people will say, "If you ever get an invitation to eat Mrs. Baltimore's fried oysters, don't let such a trifle as a previous engagement prevent you from accepting." This phase of the matter has been dwelt upon, not because the pleasures of the table form the chief element of successful hospitality, but because, though a woman may put forth many other objections, her reluctance to establish a gracious open-door policy arises mainly from wrong notions and absurd standards as to what she will give her guests to eat. If some women could get an illumination on this one point, you and I would be forthwith invited to some houses that are now cloisters.

Would you learn another secret of the witchery of hospitality? It is an open fire. Oh, that miserable dead fireplace of yours, choked with a degradation of papers and rags to keep out the dust! Did not a woman tell me, unblushingly, the other day, that in the twenty-five years she had lived in her house she had never had a fire in her parlor grate? Open it up, I beg you; buy a cord of wood or a ton of cannel coal, even if you have to go without new curtains. When your guests bask in the glories of the fire they will have no time to look at curtain stuff. But will not a gas-log do as well? you ask. There you show the densest ignorance. Can you not see that one of the chief joys of an open fire is the chance to poke it? Oh, the rapture of turning the log over and seeing the swarm of fireflies dance up the chimney! Away with your burlesque, cast-iron makeshift! At our home, when we wish to prove to a guest that he is admitted into the inner circle of the family life, he is told that he may poke the fire whenever he chooses. At first he handles the poker gingerly, and gives awkward little jabs at the fire. Poor soul, he does not know any better. He was brought up in the society of steam pipes. But soon the joy of poking steals over him; he loses his self-consciousness—then becomes easy and confident—next grows scientific—and ends by arrogantly instructing the Lord of the Hearth: "Pshaw, that isn't the way. Let me show you how to poke a fire." Take my word for it, people will travel miles across a city, at the risk of life and limb, lured by the magic of a blazing hearth.

Another necessity for true hospitality is a happy home. Family skeletons have such an unpleasant habit of not staying decently shut up in their closets. They will peer out through a crack in the door, or will boldly sally forth and stalk through the rooms. Guests are not deceived by mere pretense of happiness. The most stupid person can tell whether

love reigns in the home or not. Husbands and wives at variance with each other, or coolly indifferent, may entertain elaborately and successfully, but true hospitality is only found in a happy home.

Hospitality is entirely disinterested. It keeps no ledger, it enters no daily debits and credits. It does not coolly compute its profits. Hospitality does not weigh its guests by the world's faulty scales, but asserts its right to enjoy friends for their worth, or congeniality of taste, or learning, or wit, or even their oddities, quite apart from any consideration of their garments, or gold, or lineage, or luck.

But they who wish to taste the sweetest bliss of hospitality will go a step farther. They will ask, "How may this home of ours, so full of love, so warm with happiness, become a ministry to others? May it not be a place where sad folk are surprised to discover themselves happy once more, where lonely ones find comradeship, and where the discouraged are stimulated to fresh endeavor?" Surely one would covet such a ministry for his home, and would rejoice if any one would say, "I could not have lived through those hard days if your home had not been so freely open to me." It does not take much imagination to see how, in a hospitable home, the "prophet's room" principle might be put to beautiful service. Think of a convalescent, weary with the monotony of her unfavorable surroundings, brought here for more rapid recovery; or of a faithful mother with such exhausting home cares that it is heaven to slip away for just twenty-four hours to a quiet place where she can lie in bed all morning and luxuriate in not thinking of a blessed thing; or of some little clerk who cannot have a vacation, given the pleasure of a weak's change of room and fare, with the diversion of a new route to her work; or of a country parson invited to the city for a fortnight to "freshen up" by hearing the great preachers and studying new methods.

It would be well if young people who are just establishing a home would consider seriously what kind it shall be. If it be their good fortune to be of one mind in longing to exercise hospitality of the highest type, let them study the homes that most closely approach their ideal, if haply they may catch the secret.

Tit for Tat.

Here is a story, from the same source, of how the great Whistler, who seldom met his match, was once worsted by Sir Morell Mackenzie, the noted throat specialist. He one day called in Sir Morell to treat a favorite French poodle at his house, and, needless to add, the renowned physician was not best pleased at being called in to examine a sick dog. He, however, said nothing, but pocketed his fee and drove away. Next day he sent urgently for Whistler, asking him to call as quickly as possible. When the artist duly arrived in haste, Sir Morell said with business-like solemnity: "How do you do, Mr. Whistler? I wanted to see you about having my front door painted."

TRADE TOPIC.

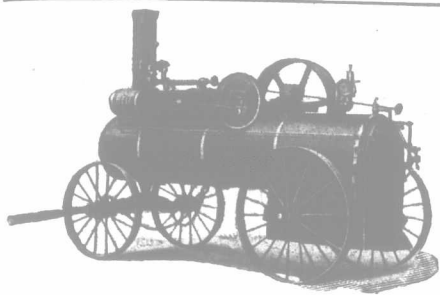
THE WESTERN FAIR.—The Secretary of the Western Fair is in receipt of the entry of a large herd of cattle from Edmonton, Alta. This shows the widespread popularity of the London Exhibition. Stockmen and breeders of Ontario will do well to see to it that they are not left behind, when it comes to competition with the cattle of the Western Provinces. This is one advantage of an exhibition like the Western Fair, bringing the very best stock of all the Provinces together in competition where farmers and stockmen are gathered, and are always looking for the best to purchase in order to improve their own herds. This nineteen twelve promises without doubt to be the banner year for London's Exhibition. All information given by Secretary A. M. Hunt, at the General Offices, Richmond street, London, Ont.



Hairs on the Face

This blemish can only be permanently removed by Elec rolysis. The treatment is not painful when performed by competent operators. We employ none other. The use of depilatories, cutting, pulling, burning or rubbing with stone only increases and strengthens the growth. We assure satisfaction in each case. Come for treatment during the Exposition (Aug. 24 - Sept. 9). **Moles, Warts and Red Veins** also successfully treated. Descriptive booklet "F" mailed on request.

Hiscott Dermatological Institute
61 College St. Toronto. Estab. 1892



Rebuilt Portable Engines

We have a splendid stock of good, rebuilt, portable engines, of different types, and by different makers, from 10 to 18 horse-power, all splendid value at the prices we ask for them.

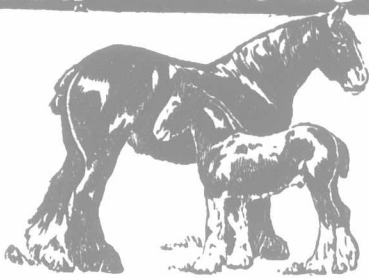
Suitable for farmers' own use, silo-filling, threshing, and other work.

Ensure having your silos filled at the proper time by having one of these engines on hand to do the work.

We also have several rebuilt traction engines and threshing machines to offer. Descriptions and prices of our stock will be given promptly on request.

The Robt. Bell Engine & Thresher Co.
LIMITED
Seaford, Ontario.

INSURE YOUR HORSES



FOALING INSURANCE.

A small premium will secure a policy in our Company by which you will be fully insured against any loss resulting from the death of your mare or its foal, or both. All kinds of insurance on Live Stock. Transit Insurance covering horses on board cars for 5, 10, 15, 20 or 30 days.

PROSPECTUS FREE ON DEMAND.

General Animals Insurance Company of Canada

Head Office: 71A St. James St., Montreal

OTTAWA BRANCH:

No. 106 York Street, Ottawa

Toronto Agency: J. A. Caesar,

Room 2, James Building, Toronto, Ont.

Ontario Ladies' College

(Trafalgar Castle) CANADA
WHITBY, ONTARIO,

Perfect surroundings. Full courses in LITERATURE, MUSIC, FINE ART, ELOCUTION, COMMERCIAL AND HOUSEHOLD SCIENCE. Splendid Organization. Moderate Rates.

Write to principal for Calendar.
REV. J. J. HARE, Ph.D., Whitby, Ont.

"The Farmer's Advocate" Fashions.

Please order by number, giving age or measurement, as required, and allowing at least ten days to receive pattern. Price ten cents per pattern. Address, Fashion Dept., "The Farmer's Advocate," London, Ont.



7532 Blouse with Long Shoulder and Over Piece Sleeves, 31 to 40 bust.

7528 Corset Cover for Misses and Small Women, 14, 16 and 18 years.



7425 Fancy Blouse, 34 to 42 bust.



7414 Morning Jacket with Peplum 34 to 44 bust.



7504 Five-Gored Skirt for Misses and Small Women, 14, 16 and 18 years.

7499 Child's Russian Dress, 2 to 6 years.



7415 Child's One-piece Dress or Blouse, 2 to 6 years.

7499 Child's Russian Dress, 2 to 6 years.

The Fight with a Bear.

Gerard did not answer, for his ear was attracted by a sound behind them. It was a peculiar sound, too, like something heavy, but not hard, rushing softly over the dead leaves. He turned round with some little curiosity. A colossal creature was coming down the road at about sixty paces distant.

He looked at it in a sort of calm stupor at first, but the next moment he turned ashy pale.

"Denys!" he cried. "Oh, God, Denys!"

Denys whirled round.

It was a bear as big as a cart-horse. It was tearing along with its huge head down, running on a hot scent.

The very moment he saw it, Denys said in a sickening whisper:

"The cub!"

Oh, the concentrated horror of that one word, whispered hoarsely, with dilating eyes! For in that syllable it all flashed upon them both like a sudden stroke of lightning in the dark—the bloody trail, the murdered cub, the mother upon them, and it. Death!

All this in a moment of time. The next, she saw them. Huge as she was, she seemed to double herself (it was her long hair bristling with rage); she raised her head big as a bull's, her swine-shaped jaws opened wide at them, her eyes turned to blood and flame, and she rushed upon them, scattering the leaves about her like a whirlwind as she came. "Shoot!" screamed Denys; but Gerard stood shaking from head to foot, useless.

"Shoot, man! ten thousand devils, shoot! Too late! Tree! tree!" and he dropped the cub, pushed Gerard across the road, and flew to the first tree and climbed it, Gerard the same on his side; and as they fled, both men uttered inhuman howls like savage creatures grazed by death.

With all their speed, one or other would have been torn to fragments at the foot of his tree; but the bear stopped a moment at the cub.

Without taking her bloodshot eyes off those she was hunting, she smelt it all round, and found, how her Creator only knows, that it was dead, quite dead. She gave a yell such as neither of the hunted ones had ever heard, nor dreamed to be in nature, and flew after Denys. She reared and struck at him as he climbed. He was just out of reach.

Instantly she seized the tree, and with her huge teeth tore a great piece out of it with a crash. Then she reared again, dug her claws deep into the bark, and began to mount it slowly, but as surely as a monkey.

Denys's evil star had led him to a dead tree, a mere shaft, and of no very great height. He climbed faster than his pursuer, and was soon at the top. He looked this way and that for some bough of another tree to spring to. There was none; and if he jumped down he knew the bear would be upon him ere he could recover the fall, and make short work of him. Moreover, Denys was little used to turning his back on danger, and his blood was rising at being hunted. He turned to bay.

"My hour is come," thought he. "Let me meet death like a man."

He knelt down and grasped a small shoot to steady himself, drew his long knife, and, clenching his teeth, prepared to jab the huge brute as soon as it should mount within his reach.

Of this combat the result was not doubtful.

The monster's head and neck were scarce vulnerable for bone and masses of hair. The man was going to sting the bear, and the bear to crack the man like a nut.

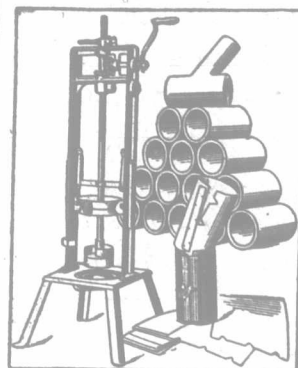
Gerard's heart was better than his nerves. He saw his friend's mortal danger, and passed at once from fear to blindish rage. He slipped down his tree in a moment, caught up the cross-bow, which he had dropped in the road, and, running furiously up, sent a bolt into the bear's body with a loud shout. The

White Swan Yeast Cakes' RECORD

Thousands of White Swan Yeast Cakes have been sold in Canada without a single complaint. Can the same be said about other brands? Sold in packages of 6 cakes for 5c. Send for free sample.

White Swan Spices & Cereals, Ltd.
TORONTO, ONT.

MAKE YOUR OWN TILE



Cost \$4.00 to \$6.00 per 1,000
Hand or Power
Send for Catalog

Farmers' Cement Tile Machine Co.
Walkerville, Ont.

AGENTS



Amazing Invention

Entirely new kind lamp burner; generates gas; makes extremely large powerful white light. Smokeless, odorless. Sells everywhere. Nothing like it. Exclusive territory contracts granted. Positively not sold in stores. Agents making big money.

Experience unnecessary. Sample outfit 35c, postpaid. Partic lars FREE. Great White Light Co., Dept 302, Windsor, Ont.

Registered Seed Wheat for Sale

Dawson's Golden Chaff grown according to the rules of the Canadian Seed Growers' Ass'n for the last 12 years. C. R. GIES, Heidelberg

Dawson's Golden Chaff Wheat

Highest yield at experimental farm last sixteen years. Average yield 54 1/2 bushels Withstood last winter well. Free of weeds. \$1.50 per bush; over ten bush., 5% discount; over twenty bush., 10%.

W. C. PEARCE, IONA, ONT.

For Sale: Poland China Swine

of all ages. Pairs not akin. Imo. and home bred. See them at Toronto Exhibition. Prices easy.

Geo. G. Gould, Edgar's Mills, Ontario.

BULL WANTED: SHORTHORN

Best breeding. Address: Box 256, Paisley, Ont.

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 30 cents.

CHOICE S.-C. White Leghorn Cockerels for sale, \$1.00 each. Geo. D. Fletcher, Binkham P.O., Erin Sta., C.P.R.

JULY SALE—2,000 baby chicks; 10,000 hatching eggs; 500 yearling hens; 50 yearling males. Chicks, \$2.00 per 100; eggs, \$1.50 per 15. \$7.00 per 100; hens, \$1.50 to \$2.00 each; males, \$3.00 to \$5.00 each. B. P. Rocks, White Wyandottes, R. C. R. I. Reds and S. C. White Leghorns. Write to-day for illustrated catalogue. L. R. Guild, Box 16, Rockwood, Ont.

MONEY in POU LTRY—Our bred-to-lay strains are putting poultry keeping on a paving basis for hundreds of farmers. Write for illustrated catalogue and Summer Sales List. They are free. L. R. Guild, Box 16, Rockwood, Ont.

FOR SALE—A Big Gelding rising 6 (Clydesdale). Very handsome. Coal black. Weight 1,800 lbs. Clean, hard legs, and the best of feet. A grand horse for the exhibitions. Can win. Price reasonable. C. C. Hanson, Dixville, Que. G.T.R.

MULSTENS and TAMWORTHS—As I have sold my farm, I am offering anything in my herd for sale, including calves sired by Sir Lyons Hengerveld Segis; sire King Segis; dam Blance Lyons De Kol, having a record of 334 lbs. of butter in seven days. Will be at To onto Exhibition. J. MCKENZIE, WILLOWDALE, ONT.

The Western Fair

LONDON'S POPULAR EXHIBITION

September 6th to 14th

This will be the banner year. Stockmen and breeders cannot afford to miss the opportunity of exhibiting their stock at London. This exhibition always brings buyers.

\$25,000 IN PRIZES AND ATTRACTIONS

Live stock parade daily. Two speed events each day.

Dog Show commences Tuesday, Sept. 10th

Wonderful programme of attractions twice daily. Besses O' the Barn Band, the great English musical combination. Do not fail to hear them. Special railway rates over all railroads in Western Ontario.

Grand Stand Prices - 15, 25 and 50 cts.

W. J. REID, President. A. M. HUNT, Secretary

GRAND TRUNK RAILWAY SYSTEM

FARM LABORERS' EXCURSIONS

\$10.00 to Winnipeg via Chicago

Plus half cent mile from Winnipeg to destination, but not beyond MacLeod, Calgary or Edmonton. Returning half-cent mile to Winnipeg, plus \$18.00 to destination in Eastern Canada.

AUGUST 20th—From Toronto to Sarnia Tunnel, inclusive, via Stratford, and all stations South thereof in Ontario.

AUGUST 23rd—From all stations North of, but not including Main Line Toronto to Sarnia Tunnel, via Stratford; all stations Toronto and North, and East of Toronto to Kingston and Renfrew.

AUGUST 28th—From all stations Toronto and East, and East of Orillia and Scotia Junction.

AUGUST 30th—From all stations Toronto to North Bay, inclusive, and West thereof in Ontario.

The Grand Trunk Pacific Railway is the shortest and quickest route between Winnipeg-Saskatoon-Edmonton.

New Fast Express Service between Winnipeg, Yorkton, Canora and Regina.

Canadian National Exhibition

TORONTO

Single Fare for Round Trip

Good going August 24 to September 9 inclusive. Return Limit September 10, 1912

Special low rates on certain dates

ASK ANY GRAND TRUNK AGENT FOR FULL PARTICULARS

Caldwell's Molasses Meal

Our Booth at the Toronto Exhibition will be located under the Grand Stand.

Come in and see us when at the Fair and get acquainted. We have something new in calf meal to show you.

The Caldwell Feed Co.

Limited
Dundas, Ontario

RIVERSIDE HOLSTEINS

Our chief sire is King Johanna Korndyke. The records of his dam, sire's two nearest dams, and eight of their sisters, average 33.35 pounds, among which are six past and present world's champions. Assisting him is Prince De Kol Poseh, whose dam won the dairy test at Guelph two years. For sale: Young bulls by them and out of record dams.

John W. Richardson, Caledonia P.O. and Sta. Phone.

bear gave a snarl of rage and pain and turned its head irresolutely.

"Keep aloof," cried Denys, "or you are a dead man."

"I care not"; and in a moment he had another bolt ready, and shot it fiercely into the bear, screaming, "Take that!" take that!"

Denys poured a volley of oaths down at him. "Get away, idiot!"

He was right; the bear, finding so formidable and noisy a foe behind him, slipped growling down the tree, rending deep furrows in it as she slipped. Gerard ran back to his tree and climbed it swiftly. But while his legs were dangling some eight feet from the ground, the bear came rearing and struck with her fore-paw, and out flew a piece of bloody cloth from Gerard's nose. He climbed, and climbed; and presently he heard, as it were in the air, a voice say, "Go out on the bough!" He looked, and there was a massive branch before him shooting upwards at a slight angle; he threw his body across it, and by a series of convulsive efforts, worked up it to the end.

Then he looked round panting.

The bear was mounting the tree on the other side. He heard her claws scrape, and saw her bulge on both sides of the massive tree. Her eye not being very quick, she reached the fork and passed it, mounting the main stem. Gerard drew breath more freely. The bear either heard him, or found by scent she was wrong; she paused; presently she caught sight of him. She eyed him steadily, then quietly descended to the fork.

Slowly and cautiously she stretched out a paw and tried the bow. It was a stiff oak branch, sound as iron. Instinct taught the creature this. It crawled carefully out on the bough, growling savagely as it came.

Gerard looked wildly down. He was forty feet from the ground. Death below. Death moving slow but sure on him in a still more horrible form. His hair bristled. The sweat poured from him. He sat helpless, fascinated, tongue-tied.

As the fearful monster crawled growling towards him, incongruous thoughts coursed through his mind. Margaret—the Vulgate, where it speaks of the rage of a she-bear robbed of her whelps—Rome—eternity.

The bear crawled on. And now the stupor of death fell on the doomed man; he saw the open jaws and bloodshot eyes coming, but in a mist.

As in a mist he heard a twang; he glanced down; Denys, white, and silent as death, was shooting up at the bear. The bear snarled at the twang, but crawled on. Again the cross-bow twanged, and the bear snarled and came nearer. Again the cross-bow twanged; and the next moment the bear was close upon Gerard, where he sat, with hair standing stiff on end, and eyes starting from their sockets, palsied. The bear opened her jaws like a grave, and hot blood spouted from them upon Gerard as from a pump. The bough rocked. The wounded monster was reeling; it clung, it stuck its sickles of claws deep into the wood; it toppled, its claws held firm, but its body rolled off, and the sudden shock of the branch shook Gerard forward on his stomach with his face upon one of the bear's straining paws. At this, by a convulsive effort, she raised her head up, up, till he felt her hot, fetid breath. Then huge teeth snapped together loudly close below him in the air, with a last effort of baffled hate. The ponderous carcass rent the claws out of the bough, then pounded the earth with a tremendous thump. There was a shout of triumph below, and the very next instant a cry of dismay, for Gerard had swooned, and, without an attempt to save himself, rolled headlong from the perilous height.—From "The Cloister and the Hearth."

TRADE TOPIC.

The Robert Bell Engine & Thresher Company, at Seaford, Ont., advertise for sale at moderate prices, rebuilt, portable engines, suitable for farmers' own use in silo-filling, threshing, etc. Also rebuilt traction engines, descriptions and prices of which may be had by writing them.

News of the Week.

General Booth, D.C.L., Oxon., originator of the Salvation Army, is very ill.

The art exhibit at the Canadian National Exhibition, Toronto, will, this year, be exceptionally fine.

The township of Pelham, Welland Co., Ont., recently completed its fortieth year of prohibition.

The Provincial Health Department has started an investigation into the outbreak of infantile paralysis in the Niagara District.

The new Sultan of Morocco, Mulai Youssuf, was proclaimed on August 14th. His predecessor, Mulai Hafid, who abdicated, has gone to France.

Belfast, Ireland, is to build four new passenger liners for the Royal Mail Packet, to be used in the Panama Canal traffic.

The liner Olympic, sister steamer to the Titanic, is to be renovated at a cost of \$1,000,000, most of the amount going to make her safer for ocean-going.

The son recently born to Mrs. Madeleine Force Astor, widow of the late John Jacob Astor, who lost his life when the Titanic went down, is the direct heir to a fortune of \$3,000,000.

GOSSIP.

Volume 9, of South Devon Flock Book of England, has been recently issued by the South Devon Flock Book Association, and a copy has been received at this office by courtesy of the Secretary and Editor, W. W. Chapman, Mowbray House, Norfolk street, Strand, London, W. C. This volume, neatly compiled, contains pedigree records of rams numbering from 7459 to 8384, and of flocks from 1 to 241. Also a list of members of the Society is given, totaling 203.

RELEASE OF QUARANTINE FOR SCABIES IN CATTLE.

United States Secretary Wilson has issued an order, taking effect August 15, releasing from quarantine on account of the disease known as scabies in cattle, 51,664 square miles of territory in South Dakota, Nebraska, Kansas, and Texas. This action is taken as a result of the good progress that has been made by the Bureau of Animal Industry and State authorities in the work of eradicating this disease.

About ten years ago, when the work was first undertaken, scabies or mange of cattle was prevalent in the territory west of the Mississippi River, and that entire area was quarantined. Portions of the territory have been released from time to time as they were freed from the disease, until now there remains in quarantine only a comparatively small area, consisting of about one-third of Montana (in the north-eastern portion), the eastern fourth of Wyoming, small areas in South Dakota and Nebraska, the eastern third of Colorado, the eastern third of New Mexico, the Panhandle of Oklahoma, a portion of the Panhandle of Texas, and a small area in the extreme southern part of Texas. The infection in this remaining territory is very light, and the Department believes that it will be only a matter of a short time when the disease will be totally eliminated from the country.

The entire State of Kansas is now out of quarantine. Copies of the order may be obtained on application to the Secretary of Agriculture, Washington, D. C.

A colored blacksmith recently announced a change in his business as follows: "Notice—De co-partnership heretofore existing between me and Mose Skinner is hereby resolved. Dem what owe de firm will settle wid me, and dem what de firm owes will settle wid Mose."

GOSSIP.

D. Ward King, of Missouri, inventor of the split-log drag, will visit Michigan in the first half of September, 1912, and will speak in Pontiac, Marine City, Mount Clemons, and elsewhere, under the auspices of Good Road Clubs, Business Associations, and like organizations.

THE LONDON CLYDESDALE SALE.

At the auction sale at London, Ont., on August 14th, of Clydesdale fillies recently brought from Scotland by Ben Finlayson, of Stirling, in the Heatherland, was well attended. The offering was a very creditable one, in good condition, and of desirable type and breeding.

TRADE TOPICS.

The Wilson Fly Pad Company, Hamilton, Ont., in their advertisement in another column, indicate the efficiency of their proprietary fly pad, which, it is claimed, kills all the flies that come in contact with it, and leaves no excuse for exposing food to contamination by flies.

HARVESTERS FOR C. N. R. POINTS.

A considerable proportion of 50,000 men, wanted to harvest the Western grain crop, will be required along the lines of the Canadian Northern, the railroad that has tapped thousands of miles of virgin wheat land in the West.

The Cross Fertilizer Company have erected large mills at Sydney, Nova Scotia, for the production of basic slag. Their slag contains a high percentage of soluble phosphoric acid, and this, along with the lime contained, makes it valuable as a pasture fertilizer, and also for alfalfa and clover.

BEATS ALL PRICES DYEY THE FENCE MAN GUARANTEES HIS GOODS. FREE SAMPLE HE PAYS FREIGHT RUST PROOF.

You'll Never Buy Fencing as Cheap as This. Dyer's at it Again. Great Cut in Prices, if You Order Now

Ten-strand wire fencing, 36 inches high, top and bottom strands, No. 9 gauge. Intermediate strand and cross bars, No. 12 gauge. Cross bars 18 to the rod, best steel wire, going for 23c. a rod.

Remember, I pay freight in Ontario and North and South Bay. You pay freight outside this district, but you only have to pay 22c. per rod.

And it's pretty enough for front lawns.

So hurry up—get your order in now. First come first served.

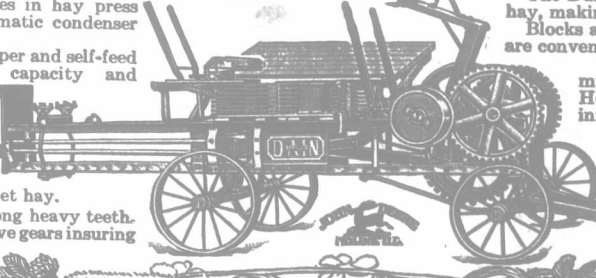
Send money order to:

Dyer, The Fence Man Dept. C. Toronto, Ont.

Don't forget to come and see me at the Exhibition. I've got some great new lines to show you

Buy this DAIN PRESS for Heaviest Work

BUILT with particular attention to the needs of the man doing custom baling, it will stand the knocks of transportation and hard wear. Best of material gives strength, and durability.



true, perfect application of power. Long shaft bearings of the finest quality of babbitt metal hold shafts in perfect line and insure proper meshing of gears, which lessens friction and saves power.

Over 1,000 Gallons of Water Pumped With 1 Pint of Gasoline

That's what you can secure with the Eclipse Pumper. This reliable little pumping engine will pump from 200 to 4,000 gallons of water per hour—depending on type and size of pump and lift—and do it on 1 pint of gasoline.

Fairbanks-Morse Eclipse Pumper

frees you from the labor of pumping by hand and makes you independent of wind or weather. The Eclipse Pumper can be attached to any windmill pump without special attachments.



The Canadian Fairbanks-Morse Co., Ltd. 444 St. James St., Montreal



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, and Pet Stock.

CHOICE 100 acre farm for sale. All good smooth work land. Apply, Box 28 Farmer's Advocate London

FOR SALE—160 acre bush farm Northern Ontario 16 1/2 acres under crop. Rich clay loam soil, good timber, 4 1/2 miles from Earleton Junction. Box 6 Earleton, Ontario.

FOR SALE—Dairy farm where dairying pays. Average prices for past seven months are: Sweet milk, \$2 per cwt.; sweet cream, 36-67 cts. per lb., butterfat; sour cream, 30 3/4 cts. per lb., butterfat. For full particulars, write: Fred. M. Johnston, Dowling Lake, Alta.

FARM for Sale—212 acres rich clay, 190 acres under good cultivation, balance bush and pasture. Barn, 60 x 90, cement foundation; cement piggy and henery; cattle shed outside. Commodious 11-room brick house, orchard, plenty hard and soft water. Situated alongside the corporation of Bradford; convenient to High and Public School and churches. One mile from G. T. R. station. Apply: Drawer 276, Bradford, Ont.

FARMS for Sale—Improved Wellington County farms. Now is the time to inspect. No obligation or expense. Jones & Johnston, Guelph.

ON SHARES—100-acre dairy farm; good soil and buildings; small house; cement silo; all stock and implements supplied, except horses. Address: W. G., "Farmer's Advocate," London.

WANTED—Cash paid for Military Land Grants in Northern Ontario. Please state price and location. Box 88, Brantford.

WANTED—Kitchen help and dining room girl. Short hours and good wages. Apply Stewardess, Victoria Hospital, London, Ont.

150 ACRES OF RICH LAND well tile drained soil, clay and sandy loam, with good brick dwelling; modern bank barns and silo nearly new, and will accommodate 50 cattle and horses with rock water before the stock; good corn land; 3 acres of good apple orchard; 10 acres of woods; 25 acres seeded to alfalfa; 25 acres red clover; 14 acres ploughed ready for fall wheat; half cash, remainder mortgage; situated 2 1/2 miles from two railway stations, 25 miles south-west of London, Ontario, in Township of Eckfried. Good stone and gravel roads to all places of business. This home has the advantages of rural mail delivery and long distance telephone. The owner wishes to retire. Apply to A. B. McDonald, Appin, Ont.

MUST BE SOLD—A Brown Thoroughbred Stallion; sixteen hands one inch; three years old; will make good sire for hunters, saddle and carriage horses. Apply to DR. WILSON, 84 KING ST., LONDON, ONT.



SYNOPSIS OF CANADIAN NORTHWEST LAND REGULATIONS.

ANY PERSON who is the sole head of a family, or any male over 18 years old, may homestead a quarter section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-agency of the district. Entry by proxy may be made at any agency, on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteader.

Duties—Six months' residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres solely owned and occupied by him or by his father, mother, son, daughter, brother or sister.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price, \$3.00 per acre. Duties—Must reside upon the homestead or pre-emption six months in each of six years from date of homestead entry (including the time required to earn homestead patent) and cultivate fifty acres extra.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may enter for a purchased homestead in certain districts. Price, \$3.00 per acre. Duties—Must reside six months in each of three years, cultivate fifty acres and erect a house worth \$300.00.

W. W. CORY, Deputy of the Minister of the Interior N.B.—Unauthorized publication of this advertisement will not be paid for.

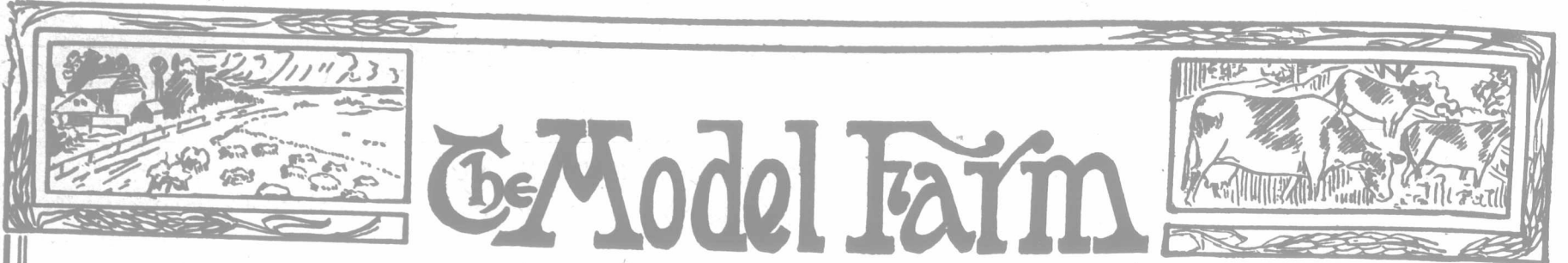
ADVOCATE ADVERTISEMENTS PAY.

GOSSIP.

T. D. Elliott, Bolton, Ont., expects to land in time for Toronto Exhibition, 20 imported Percherons, stallions and mares, grays and blacks, with plenty of size and quality; also about the middle of September an importation of Clydesdales, all personally selected by Mr. Elliott, whose former importations have met with ready sales, and whose judgment and experience is a guarantee of the quality of his new importation.

MORE MONEY FOR ANGUS AT OTTAWA FAIR.

In addition to the official prize list of the Dominion Exhibition, Ottawa, September 5th to 16th, \$200 has been added to the premiums for Aberdeen-Angus cattle. Half is contributed by the Aberdeen-Angus Association. There will be \$60 each for a grade herd, and herd under two years. There is \$40 each for the best three, get of one sire, and the best two, progeny of one cow. Live stock entries will be augmented by 27 horses and 22 cattle from Colony Farm, British Columbia. It is probable also there will be exhibits of Brown Swiss cattle, for the first time in Ottawa. Every department is filling up rapidly, and additional room has been provided for live stock.—E. McMahon, Manager.

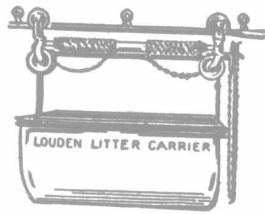


The Model Farm

Labor-Saving and Money-Making Equipment

A LOT HAS BEEN SAID about the scarcity of good farm help, and the difficulty our farmers have of keeping their sons on the farm. Well, most farmers have gone through the mill themselves, and can perhaps sympathize with the boy who seeks to get away from the drudgery that he imagines farm life has in store for him.

BUT WHY DRUDGERY? ABOUT the worst back-breaking work on a farm is stable-cleaning with old-fashioned methods. It certainly is a job any man would like to pass up. But fortunately modern methods with modern machinery have taken the drudgery out of stable-cleaning.

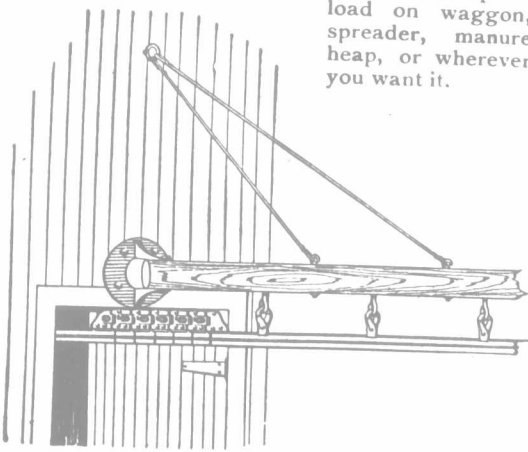


Nowadays, you fill a Louden Litter Carrier—raise it by a light pull on a chain—push the load easily and quickly to wherever you want it. Not much hard work for you in that, is there?

ALL EXPERTS AGREE THAT Liquid Manure is 50% more valuable than solid manure. Are you losing this 50%?

A Louden Litter Carrier will save it for you—and not only prevent the waste, but will make stable-cleaning an easy "chore."

The Louden swinging equipment is an ideal way of disposing of manure. With it you get a twenty or a thirty foot swing, and can dump the load on waggon, spreader, manure heap, or wherever you want it.



A DISTINCT LOUDEN FEATURE is that you can run the loaded carrier right on to the pole while swinging at any angle. You do not have to straighten the track each load.

The flexible hinge permits the carrier to run over it while at an angle.

THE SUN-SHINY SIDE OF farming is the money-making side.

An equipment that makes money is Steel Sanitary Stalls and Stanchions for cows. Now there is no doubt that a contented, comfortable, dreamy-eyed cow will give more milk than one housed in unsanitary, badly-ventilated quarters, where it has little freedom and comfort. And when you are thinking of cow profits, you must think of these things.



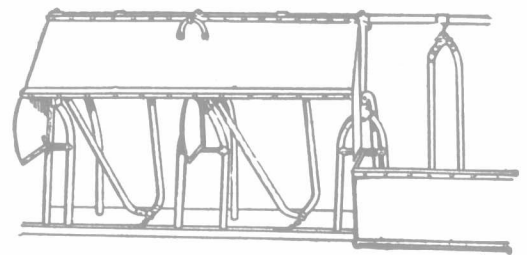
The most successful Farmers and Dairymen have thought of these things, and have equipped their stables with Cement Floors, Mangers, Steel Stalls, Stanchions, and Carriers for Feed and Litter. Stables so fitted are lasting, well ventilated and sanitary. Light and air with their germ-destroying powers fill every part of the stable. Under such conditions cows are comfortable and clean, which consequently means more and better milk, and this, in turn, means bigger profits.



STANCHIONS.

Louden Stanchions are perfect stanchions—perfect in construction—simple to lock and unlock—allow perfect freedom and comfort, yet provide a perfectly secure tie. They are made of smooth, light, strong, high carbon steel tubing, with malleable iron fittings. Construction and material are such that there are no crevices to harbor germs or dirt.

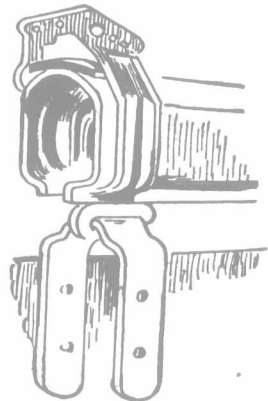
HOW DO YOU FEED YOUR cattle? Do you use the old-time shallow trough, where cows scatter their food in the feed-way, and steal each other's fodder—preventing the keeping of accurate records of feed costs and results?



Galvanized Steel Mangers are the modern way. They are convenient, and prevent feed-waste. They keep the stable tidy, too. The bottom is of cement, and the steel part is raised and lowered to allow the trough to be thoroughly cleaned. The trough can also be used for watering purposes.

EVERY FARMER HAS experienced annoyance and loss of time and temper over faulty barn-

door hangers and tracks. The Louden Hangers are made in five different styles, to suit various conditions. We recommend Louden's Bird-Proof Hanger as illustrated.



It is a hanger that gives perfect service all the year round. It always runs easily and cannot get out of order.

It cannot be clogged in any way—either by nesting birds or trash in summer, or by snow, ice or sleet in winter.

A USEFUL BOOK TO HAVE.

Every farmer can find something useful in our book "Perfect Barn Equipments." It illustrates and describes many money-making, labor-saving devices, about which a farmer ought to know.



THE SERVICES OF OUR EXPERIENCED BARN ARCHITECT ARE AT YOUR COMMAND, FREE, FOR THE ASKING. TELL US WHAT YOU WANT.

THE LOUDEN MACHINERY CO. - DEPT. 11 - GUELPH, Ont.

Why should I use Canada Cement?

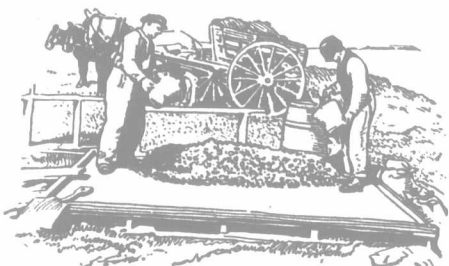


NO FARMER who has used Canada Cement asks that question, because his first trial answered it to his complete satisfaction. Yet it is only natural that a farmer who has never used concrete—perhaps yourself—should require convincing reasons before deciding to use it himself.

If we knew where you lived, and knew your name and the names of your neighbors, we could tell you of many men in your own locality who would be glad to tell why they are using Canada Cement. Since that is impossible, this advertisement will try to give you an answer to your question.

“What is Concrete?”

CONCRETE is an artificial stone. It is a mixture of cement, sand and stone, or of cement and gravel, with water. The proportions of the various materials vary according to the purpose for which the



THE mixing and placing of concrete is simple, and is easily learned. No elaborate tools are needed.

concrete is to be used. This mixture hardens into an artificial stone. This hardening process is rapid at first, and in a few days the mixture is as hard as rock. After that, time and weather, instead of making it crumble, actually make it stronger.

Since stone, sand and gravel may be found on nearly every farm, the only cash outlay is that required for cement. Cement forms only a small part of finished concrete, and this expense is relatively small.

Concrete may be mixed and placed at any season of the year (in extremely cold weather certain precautions must be observed) by your-



CONCRETE is the ideal material for barns and silos. Being fire, wind and weather proof, it protects the contents perfectly.

self and your regular help. This allows you to take advantage of dull seasons, when you would otherwise be idle. The mixing and placing is simple, and full directions are contained in the book which we will send you free.

“What Can I Use Concrete For?”

CONCRETE can be used for all kinds of improvements. By having a small supply of cement on hand you will be able to turn many an otherwise idle afternoon to good account by putting a new step on the porch, or making a few fence posts,

or repairing an old foundation wall. It is a mistake to suppose that you have to be ready for a new barn or silo to be interested in concrete. Besides, it is just as well to become familiar with the use of concrete on small jobs, for then you will be better able to handle big jobs later on.

First cost is last cost when you build of concrete. Concrete improvements never need to be repaired. They are there to stay, and every dollar put into them adds several dollars to the cash value of your farm, and in many cases improvements of this everlasting material are actually cheaper in first cost than if they were built of wood. The cost of lumber is constantly increasing, and it will not be many years before its cost will be prohibitive.

YOU should use concrete, because by so doing you can make your farm more attractive, more convenient, more profitable and more valuable.



OUR mills are located all over Canada, so that no matter where you live you can get Canada Cement without paying high prices caused by long freight hauls.

“Why Should I Use Canada Cement?”

WE were the first cement company to investigate the farmer's needs, and to point out to the farmers of Canada how they could save money by using concrete. We conducted an exhaustive investigation into the subject, learned the difficulties they were likely to encounter, and how to overcome them, and published a book, “What the Farmer Can Do With Concrete,” containing all the information that the farmer could need.

We have made a special effort to give the farmers of Canada not only the best cement that can be

made, but also every possible assistance in the use of concrete. Our free Farmers' Information Bureau is at the service of every farmer in Canada. All

questions concerning the use of concrete are answered at once, and the Bureau is always glad to receive suggestions from farmers who have discovered new uses for cement. Last year we conducted a \$3,600 Cash Prize Contest, in which farmers in every Province participated. A second contest, in which three times as many prizes are offered, has been announced for this year.

You can easily see why a company that is devoting this much attention to the farmers' needs is in better position to give you—a farmer—satisfactory service. Canada Cement will always give you satisfactory results. Every bag and barrel must undergo the most rigid inspection before leaving the factory.



THIS sign hangs in front of nearly all our dealers' stores. Let it guide you to the place where the best cement is sold.

YOU should use “CANADA” Cement because its makers offer you not only the best cement made, but also careful, conscientious, personal assistance in making use of it.



THIS book of 160 pages, handsomely bound and illustrated with photographs, was the first, and is the best work describing the farmers' uses for concrete ever published. See free offer on this page.

IF you haven't received a copy of “What the Farmer Can Do With Concrete,” write for it at once. It will be sent absolutely free, without obligating you in any way. Use a post card or clip out the coupon. We will also send particulars of the 1912 Cash Prize Contest. Address:

Canada Cement Company LIMITED
Farmers' Information Bureau
550 Herald Bldg. MONTREAL, QUE.

CANADA CEMENT COMPANY, LTD.
550 Herald Building, Montreal

Please send me, free, your book: “What the Farmer Can Do With Concrete,” and full particulars of the 1912 Cash Prize Contest.

My name is.....

Address.....

.....



The Ontario Agricultural College

A SCHOOL FOR FARMERS' SONS

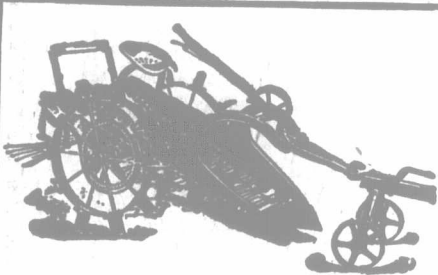
OPENS SEPTEMBER 18th, 1912

A TWO-YEARS' COURSE in general agriculture, specially designed for young men who intend to follow practical farming.

A FOUR-YEARS' COURSE leading to the degree of B.S.A., conferred by Toronto University.

For the College Calendar, giving full information, apply to:

G. C. CREELMAN, B.S.A., LL.D., President
GUELPH, ONTARIO



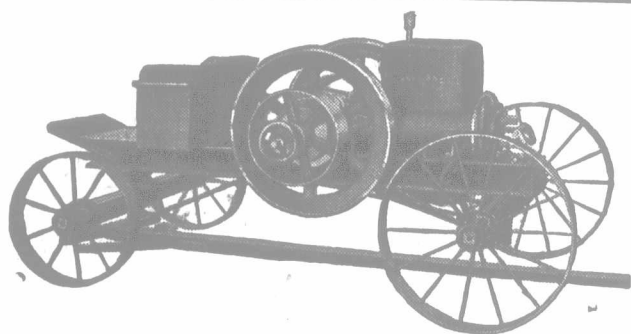
O.K. CANADIAN POTATO DIGGER

"Money In Potatoes," is invaluable to farmers. Haven't you a copy of this book? Write at once—we'll send one free—also Catalogue.

Canadian Potato Machinery
Co. Limited., Galt, Ont.

YOU wouldn't think of getting your potato field ready for planting by using a spade and a hand rake. You use a plow and harrow—and let the horses do the hard work.

Let the O.K. CANADIAN POTATO DIGGER and the horses dig your potatoes this year. All you do is sit on the machine and drive. The O. K. Canadian digs the potatoes—separates roots—cleans off the dirt—and deposits the potatoes in rows behind the machine. This machine is as great a time-saver and work-saver as the reaper and binder. O. K. Canadian is easily drawn by two horses. If you have a big crop of potatoes, write us at once about getting an O. K. Canadian—the digger that has won first prize wherever exhibited. 11



8, 12 and 16 H.P.
Engines
Mounted On
All Steel Truck

"Bull Dog" Gasoline Engines

are built especially for agricultural trade. Mounted outfit, shown above, is just the thing for work requiring a portable engine. Built without cast iron sub-base, and all unnecessary weight eliminated. Completely equipped. 8, 12 and 16 H.P. Also 1½, 2½, 4½ and 6 H.P. sizes adapted for stationary, semi-portable or portable mounting. Strong, rugged construction. No complicated working parts. Write our Canadian Agents for descriptive catalog of "Bull Dog" farm engines.

BATES & EDMONDS MOTOR CO., Lansing, Michigan

General Agents for Canada:

A. R. WILLIAMS MACHINERY CO., LTD., Toronto, Ont., St. John, N. B.

QUESTIONS AND ANSWERS. Miscellaneous.

WORMSEED MUSTARD.

Inclosed find a weed that I have found in my fall wheat, and also in spring grain. It has a yellow flower, and looks a little like wild mustard, but I do not think it is. This stalk is only half matured. I would like if you could tell me what this weed is, or if it is a bad weed, and the best way to kill it.

J. R.

Ans.—The weed is wormseed mustard, not the wild mustard. The seeds of this weed are much shorter lived than those of wild mustard, but they are bitter, and give a very bad flavor to grain or chop containing them—often so bad that stock refuse to eat it. The weed yields to thorough cultivation, so a hoed crop will usually subdue it. A short rotation, with clean cultivation, keeps it in check.

EVENING PRIMROSE—HENS TRESPASSING.

1. Inclosed find weed which is becoming very plentiful in this locality. Is it a hard weed to get out, and what is its name?

2. Neighbor's hens and chickens are a trouble to my crop. How can I enforce the law to compel them to keep them at home after giving notice?

W. J. T.

Ans.—1. The specimen is the common evening primrose (*Oenothera biennis*). This weed is becoming quite common in meadows, the seed being an impurity in grass and clover seed. If not too thick, spud it out, or cut it off below the crown early in the season. It is worst in clover fields kept for seed. It yields to thorough cultivation. A hoed crop will get rid of it.

2. Ask him again to look after them, and if he does not he is liable for the damage done.

RYE AND HAIRY VETCHES.

1. When is the best time to sow rye, and how much per acre?

2. Is it advisable, from a financial point of view, to sow hairy vetches with the rye, and how much of each per acre?

3. Can they be separated by running them through a fanning mill?

W. D. I.

Ans.—1. A bushel and a half per acre is a good seeding. Sow in September. Some prefer the early part of the month, others later, but on the whole the earlier should prove the better.

2. This is difficult to answer. Hairy vetches are expensive, the seed being about \$5 per bushel. They are sometimes sown with rye for seed production. The rye tends to keep the vines from the ground and enables the vetches to produce more seed. They are sometimes mixed with grain for the production of fodder. Sow about one bushel per acre. They have not grown in popularity in this country, and it is doubtful whether they would prove very profitable under conditions indicated.

3. A good fanning mill should make a separation between rye and vetches.

MISCELLANEOUS QUERIES.

1. What is the sire of "Apukwa" (14567), and "Auchenflower"?

2. Would you give the pedigree of "Sessaghamore" [7066] (12355)? Was he a good stock horse?

3. What are the national colors of the United States of America?

4. What solution could I put apples in to make them keep their color and freshness? If they were put in formalin, boracic acid and alcohol, how long would they need to stay in it?

W. S.

Ans.—1. Apukwa (14567), sire Hiawatha (10067), dam by Royal Favourite (10630). Auchenflower (12007), sire Montrave Mac (9958), dam by Lord Lothian (5998).

2. Sessaghamore [7066] (12355), sire Royal Favourite (10360), by Royal Gately (9844), by Mount Royal (8065); dam by Brooklyn (6547), whose dam, Miss Darnley, was sired by Darnley (222). We have no knowledge of his record as a breeder.

3. Red, white and blue.

4. Formalin is sometimes used. The fruit must be kept in the solution.



Old Dutch Cleanser

The best
all-round
cleanser in
all the
country round

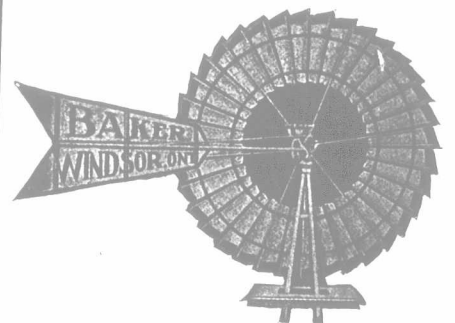
Cleans mechanically not chemically and is therefore the safest cleanser for food utensils. Quickly removes "grease and burn" from pots and pans; safely and hygienically cleanses milk pails, cream separators, and everything about the dairy. Glassware, cutlery, floors, woodwork, bathtubs, painted walls, metal surfaces, etc., become clean and shiny in a jiffy—a cleaner house with less labor.

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



"Baker" Wind Engines

Are built for hard, steady work,
and keep at it year in and year out.



It is the reputation which "BAKER" Wind Engines have fairly won and steadily held ever since their first appearance on the market, 30 years ago, that should be considered. They are famous for their durability, simplicity of construction and easy running. "BAKER" Wind Engines are so designed that the gears cannot wear out of mesh. The wheel is built on a hub revolved on a long stationary steel spindle, requiring no babbiting. It has a large number of small sails which develop the full power of the wind and enable them to pump in the lightest breezes. Has ball-bearing turn-table and self-regulating device, and all the working parts are covered with a cast shield, protecting same from ice and sleet. The above is only a few of the many features that have placed "BAKER" Mills in the lead. Let the H.-A. Co. agent give you complete information, or write direct for booklet.

We make a full line of Steel Towers, Galvanized Steel Tanks, Pumps, Pneumatic Water Systems, Spray Pumps and Gas and Gasoline Engines.

THE HELLER-ALLER COMPANY
Windsor, Ontario



Cheese Makers !

Just Remember This—

Windsor Cheese Salt will make money for you, by making better cheese for you.

Windsor Cheese Salt improves both the flavor and the keeping quality.

Windsor Cheese Salt enables you to salt the curd just right, because it dissolves slowly and evenly—stays in the curd—and because it is pure and clean and good.

Windsor Cheese Salt is cheap, because, being ALL SALT, it goes further.

Make your cheese bring you better prices by using Windsor Cheese Salt

WINDSOR CHEESE SALT

This handy farm wagon is built low (which saves time and labor loading and unloading) and will carry the heaviest load—anywhere a horse can travel. And because it never needs repairing, it's the most economical wagon on the market.

T-A Handy Farm Wagons & Wide-Tire Steel Wheels

Equip your old wagons with T-A Wide-Tire Steel Wheels and they'll be just as good as new. And besides they'll carry 25 to 50 per cent. heavier loads.

For catalogue and descriptive literature write to:

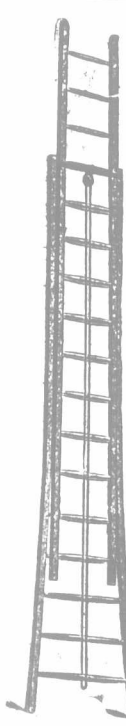
Tudhope-Anderson Co., Limited
ORILLIA, ONT.



THE Stratford Extension Ladder
IT IS strong, serviceable, light, easily operated and durable, with wire-trussed reinforced sides.

If interested, write for booklet H, which tells all about this and other lines of ladders.

The Stratford Mfg. Co., Limited
STRATFORD, ONTARIO



QUESTIONS AND ANSWERS. Miscellaneous.

GOOD SPECIMENS NECESSARY.

During this season scarcely a day passes without one or more specimens of noxious weeds being sent to this office for identification. We are glad to get these, and pleased to help our subscribers in any way possible in identification and means of eradication of weeds. Many of the plants sent in are recent introductions from other countries, and the different species of so many of our common weeds are so nearly identical that it becomes necessary to apply the botanical key in order to be sure of the species. Now, to do this, it is necessary to have a perfect specimen; that is, an entire plant—flower, stem, leaf and root. Not only must the entire plant be sent, but it must be packed so as to reach us in good condition. It only requires a very small pasteboard box, and that the plant be wrapped in damp cloth or some damp wadding to keep it fresh until it arrives. Label each plant carefully when more than one species is sent, and do not neglect to give an account of the conditions under which it is growing. A little care in this direction will aid us greatly, and will insure answers in shorter time.

POISON IVY.

Have a few stalks of poison ivy. Would like to know how to get rid of them without getting poisoned.

A SUBSCRIBER.

Ans.—Some persons are immune to the poison of this plant, and they could dig them out and burn them. A half a teaspoonful of concentrated sulphuric acid applied to the stem every two or three weeks in spring, when the plant is growing, will kill it. Care must be taken to keep the acid away from the clothes or the skin, as it burns. The poison is a non-volatile oil, and can only be active when in contact. It is insoluble in water, and thus water will not wash it from the skin. Alcohol or sugar of lead will remove it. Unless the oil does not touch the skin, no poison is likely to occur.

BUCKHORN.

I have inclosed the stem and leaf of a plant. I would like to know the name of this plant, and if it would render clover unfit for seed, as I have a field of clover with a lot of this plant in it.

L. W. L.

Ans.—The weed is ribgrass, sometimes called buckhorn, English plantain, or ribwort. This is a common weed in clover fields, as its seed is a common impurity in clover seed, and should be carefully avoided. No clover seed containing the seed of this weed should be sown. It is difficult to separate it from clover seed, and fields badly infested should not be saved for seed. Where only a few plants are present, they may be spudded or pulled out. A hoed crop suppresses the weed, and short rotation of crops is a great help in keeping it down. In clover is where it gives most trouble.

INFECTIOUS OPHTHALMIA.

I have a herd of steers which I am feeding off the grass. They get plenty of salt and water of good quality, and all the timothy they can eat. Five of the steers have each got a sore eye; three of them are blind, and the other two are very dim.

The eye begins to run water, and in a week or ten days the eyeball is very red and inflamed, and the sight turns white. Please tell me the name of the trouble; also the cause and cure for same.

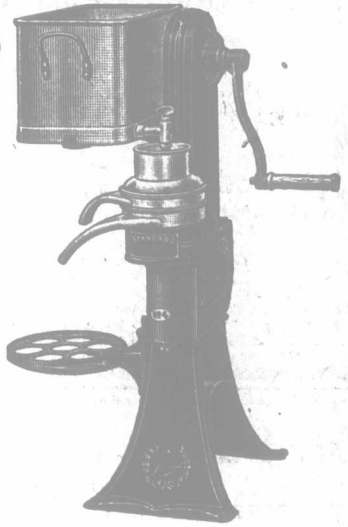
J. R. E.

Ans.—This is an infectious form of ophthalmia which attacks cattle and sheep. All affected animals should be isolated, and kept in a well-ventilated but almost dark building. Each steer should be given one pound of Epsom salts and one ounce ginger. The eyes should be well bathed with warm water three times daily, and a few drops of the following lotion put into each eye after bathing, viz.: 10 grains sulphate of zinc, 20 drops fluid extract of belladonna, and 2 ounces distilled water.

See Our Exhibits At The Fairs

You are cordially invited to visit our Exhibits at the Fall Fairs, and to make a thorough inspection of the

Standard



CREAM SEPARATOR, and learn why it has earned the title of the "World's Greatest Separator."

Toronto, Aug. 24 to Sept. 9.

Renfrew, Sept. 18 to 20.

Quebec, Aug. 24 to Sept. 3.

Hallifax, Sept. 11 to 19.

Sherbrooke, Aug. 31 to Sept. 7.

St. John, N. B., Sept. 2 to 7.

London, Sept. 6 to 14.

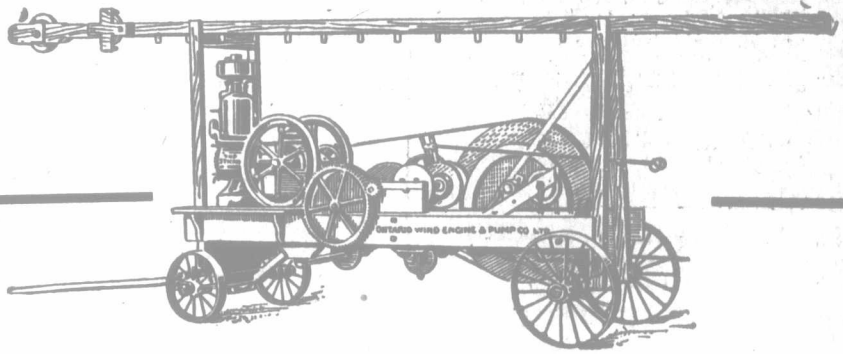
Ottawa, Sept. 5 to 16.

Charlottetown, P. E. I., Sept. 4 to 7.

In the meantime it might be well to get a STANDARD catalogue and learn something about the machine you are going to see. Drop us a post card to-day.

The Renfrew Machinery Co., Ltd.
Head Office and Works: RENFREW, ONT.

Sales Branches at Winnipeg and Sussex.



START IN THE WELL-DRILLING BUSINESS

Here's a big money-making proposition for the live man anywhere who is in earnest. Drilled wells everywhere in demand. Many drillers make \$10 to \$20 a day. This machine drills either deep or shallow wells in any kind of soil or rock. One man can handle it—three right-hand levers complete every operation. Write at once for full particulars.

ONTARIO WIND ENGINE AND PUMP COMPANY, LIMITED
Winnipeg TORONTO Calgary

We supply Well Casing and General Deep Well Supplies of all kinds. Write for prices

POLES OF STERLING QUALITY

Michigan White Cedar Telephone Poles

W. C. STERLING & SON COMPANY

Oldest Cedar Pole Firm in Business

Produces for 32 Years

1880

MONROE, MICHIGAN

1912

ORMSBY GRANGE STOCK FARM, Ormstown, P. Que.

My fall importation, which will be the largest yet made by me, will be personally selected, will arrive last week in September. Good colors, heavy bone, best of pedigrees and reasonable prices. Wait for them if you want good ones.

D. McEachran.

We still have on **Clydesdale Stallions** with both size and hand a few good winners and breeding of the best blood in Scotland. Prices and terms the best in Canada, quality, all prize winners.

John A. Boag & Son, Bay View Farm, Queensville, Ont.
On the Toronto & Sutton Radial Railway Line. Long-distance Phone.

MT. VICTORIA STOCK FARM, Hudson Heights, P. Q.

We have some very choice young stock for sale, both sexes. Clydesdales and Hackneys from champion sires and well bred dams, at reasonable prices.


T. B. MACAULAY, Prop.

E. WATSON, Mgr.

BLAIRGOWRIE IS OFFERING AT PRESENT:

Cotswold and Shropshire Sheep. from Imp. stock. Show sheep all ages, and of both sexes. See my exhibit of Cotswolds at Toronto. Also 50 Shropshire Field Ewes, 25 Shropshire Field Rams, 25 Cotswold Field Rams, 25 Cotswold Field Ewes. Childrens' Ponies nicely broken and quiet. Myrtle, C.P.R. Stn., L.-D. Phone. John Miller, Jr., Ashburn, P.O.


Horse Owners! Use
GOMBAULT'S
Caustic Balsam



A Safe, Speedy, and Positive Cure
The safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.
The Lawrence-Williams Co., Toronto, Ont.

Dr. Page's English Spavin Cure

For the cure of Spavins, Ringbones, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements.
This preparation (unlike others, acts by absorbing rather than a blister. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair. Manufactured by Dr. Frederick A. Page & Son, 7 and 9 Yorkshire Road, London, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents:



J. A. JOHNSTON & CO., Druggists,
171 King St. E. TORONTO, ONT.

ABSORBINE STOPS LAMENESS

From a Bone Spavin, Ring Bone, Splint, Curb, Side Bone or similar trouble and gets horse going sound. Does not blister or remove the hair and horse can be worked. Page 17 in pamphlet with each bottle tells how. \$2.00 a bottle delivered. Horse Book 9 is free.
ABSORBINE, J.E. Liniment for man-kind. Removes Painful Swellings, Enlarged Glands, Gout, Wens, Bruises, Varicose Veins, Venousities, Old Sores, Allays Pain.
Will tell you more if you write. \$1 and \$2 a bottle at dealers or delivered. Manufactured only by W. F. YOUNG, P.D.F., 259 Lyman Bldg., Montreal, Ca.

Messrs. Hickman & Scruby
COURT LODGE, EGERTON, KENT, ENG.
EXPORTERS OF

Live Stock of all Descriptions
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ONTARIO WIND ENGINE & PUMP CO., Ltd.
Toronto
Winnipeg, Calgary

When writing mention Advocate

QUESTIONS AND ANSWERS.
Veterinary.

INDIGESTION.

Three weeks ago a milking cow that will be due to calve December 1st, came in full of grass and bloated. We gave her oil, and in a week's time her bowels moved, but still she bloats, and does not chew her cud.
R. T. S.

Ans.—This is indigestion. Purge her with 1½ lbs. Epsom salts and 1 ounce ginger, and follow up with 2 drams each of nux vomica and gentian three times daily. Feed on mash and a little hay or grass, and gradually increase the amount as digestion improves. In addition to the above, add to her drinking water one-fifth its bulk of lime water. V.

HAEMATURIA, WITH URINARY IRRITATION.

Mare passed bloody urine before foaling three months ago. She still does so, and strains frequently, voiding a little, and when working the urine leaks away.
B. F. A.

Ans.—Treatment is likely to be tedious and difficult. Give her 1 ounce tincture of iron and 1½ ounces tincture of hyoscyamus in a pint of cold water twice daily until blood ceases to pass. Then, if irritation and frequent voidance of small quantities of urine continue, substitute tincture of nux vomica in half-ounce doses for the tincture of iron, and continue treatment. Feed well, and give regular exercise. V.

FATALITY IN HORSE.

Will you give your opinion as to the cause of death in a horse that showed the following symptoms: On Tuesday morning he was found sick. He refused food, but drank water. When taken out at noon he staggered. Liquid ran from nose and eyes. Hind legs were slightly swollen. He did not lie down at all. He had a suppressed cough which evidently caused great pain. He became weaker and weaker until Thursday morning, when he fell against manger and died.
W. S. J.

Ans.—The symptoms indicate an acute attack of pleurisy, but in order to make a definite diagnosis it would be necessary to know the temperature and the condition of the pulse. The trouble was, no doubt, either pleurisy or pneumonia, and the attack was so severe it is doubtful whether any treatment would have been successful. V.

HAEMATURIA.

My cows pass bloody urine. I have had several affected. The condition continues for about two years, and then the patient dies. They are pasturing in the same pasture as the cattle of three or four other owners, and all are well but mine. Is it contagious?
U. T.

Ans.—This is called haematuria, or bloody urine. It is not contagious. It is due to rupture of small blood vessels in the kidneys. This is due to a weakness of the vessels, which in many cases is congenital or hereditary, as it apparently is in your herd. Treatment is not always successful. It consists in giving 1 ounce tincture of iron in a pint of cold water as a drench three times daily until blood ceases to pass. As the weakness is often congenital, the trouble is liable to recur without apparent cause, and it would be wise to dispose of these animals as soon as they can be fitted for the butcher, and get a herd of another strain or family. V.

Miscellaneous.

STALLION ENROLLMENT.

Where does a person have to have their stallion enrolled?
D. S. M.

Ans.—The stallion enrollment board looks after the enrollment. A. P. Westervelt, Department of Agriculture, Toronto, is secretary. The board supplies forms, and inspectors are appointed to inspect the horses, notification being given the owner.

"Ah! I see you're rather busy now. I'll look in again when you have a couple of hours to spare."

The Editor (wearily)—"Oh, thanks! Then you'll be present at my funeral."

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WILSON'S FLY PADS

persistently, this peril will be tremendously reduced.



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will do a better day's work for you tested in the field alongside any other. We know the Bissell will outclass the others, but we want you to see the Bissell at work. But first ask Dept. W to mail you our Disc Harrow Catalog.



T. E. Bissell Co. Ltd.
Elora, Ont. 104

Aberdeen-Angus—A few bulls to sell yet; also females. Come and see them before buying. Drumbo Station.

Walter Hall, Washington, Ont.

Mike Hogan had been a laborer, but he received a large legacy, after which the family put on a great deal of style and endeavored to forget Mike's humble beginning. Finally he died, and at the funeral many beautiful floral tributes were received from his sorrowing friends. In looking at them the widow suddenly dried her tears and glared angrily at an anchor of flowers.

"What's the matter?" asked a friend who was with her.

"What do you want to know," said the bereaved wife, in tones trembling with anger, "is th' name av th' mon that sint thot pick."

HAD DYSPEPSIA FOR TEN YEARS

COULD NOT KEEP ANYTHING ON HER STOMACH

Dyspepsia is caused by poor digestion, and to get rid of this terrible affliction, it is necessary to place the stomach in a good condition. For this purpose Burdock Blood Bitters has no equal.

Mrs. Norman A. MacLeod, Port Bevis, N.S., writes:—"For the last ten years I suffered dreadfully with dyspepsia, and I could not keep anything on my stomach. I tried several kinds of medicines, but none of them seemed to do me any good. At last a friend advised me to try Burdock Blood Bitters, which I did, and after using five bottles I was completely cured. I would advise any one troubled with stomach trouble to use B.B.B. I cannot recommend it too highly."

Burdock Blood Bitters is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

QUESTIONS AND ANSWERS. Miscellaneous.

BUTTER FROM BUTTER-FAT.

Kindly let us know, through your valuable paper, how many pounds of butter 100 lbs. of cream would make, testing 30 per cent. butter-fat. E. O.

Ans.—There is no absolute proportion, and, in the nature of the case, there can be none. Assuming average conditions, the overrun should be in the neighborhood of one-sixth. If it were so, the amount of butter made from the 30 pounds of butter-fat contained in the hundred pounds of cream would be 35 pounds.

LIGHTNING RODS—BINDWEED.

1. In erecting lightning rods, what would you recommend for the rod on top of the barn, and how would you connect it to the wire which runs to the ground?

2. I enclose also the blossom of a plant. Can you tell me whether it is bindweed or Virginia creeper?

J. H. C.

Ans.—1. We presume you are erecting homemade lightning rods. Make the uprights of the same material as the main rod. Use soft galvanized No. 9 wire, nine strands. Set a heavy wagon in a convenient place, and raise a wheel as for greasing. Measure out the needed length for the main rod and uprights, and attach one end of the wires to a firmly-driven stake and the other end each wire to a spoke in the wheel. Turn the wheel until the cable is twisted. Uprights should be about five feet high, and should have the wires opened out at the top. To make these lengths of six and one-half feet should be cut from the cable, and a sharp head made a foot and one-half from the end. This bend is opened out and securely wound around the main rod forming the attachment to it. To hold the points upright, get the blacksmith to make for each an iron tripod.

2. The blossom is that of bindweed.

Veterinary.

APOPLEXY—OPHTHALMIA.

1. Sow, in good condition, was chased by a dog for about 20 rods, when she began to stagger, fell down, and died.

2. Cows have sore eyes. One or two at a time suffer. The eyes run water, and seem quite painful. L. H.

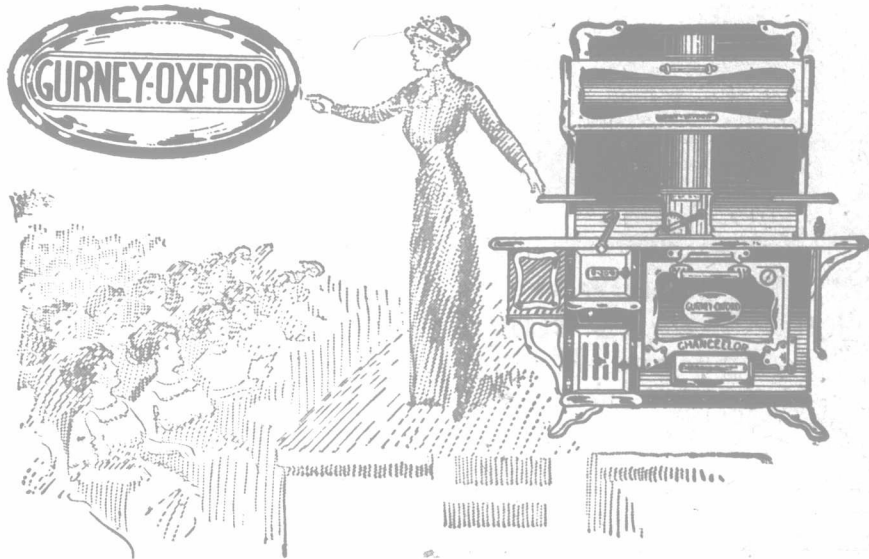
Ans.—1. She died from cerebral apoplexy, caused by over-exertion. In such cases, death takes place so quickly there is no time for treatment.

2. This is infectious ophthalmia. Isolate the diseased in a partially-darkened stable, well ventilated, but excluded from drafts. Give a laxative of 1 lb. Epsom salts and 1 ounce ginger to each. Bathe the eyes well with hot water three times daily, and after bathing put a few drops of the following lotion into each eye, viz.: Sulphate of zinc, 10 grains; fluid extract of belladonna, 20 drops; distilled water, 2 ounces. V.

DIARRHEA.

Mare, fed on hay and shorts, has a foal four weeks old. The foal takes diarrhea frequently, and eats horse's droppings. We are able to check the diarrhea, but it recurs. C. R. C.

Ans.—The feeding of shorts to the mare tends to cause diarrhea in the foal, as also does the indulgence to the abnormal appetite noted. The former can be removed by feeding oats instead of shorts; the latter can be prevented only by careful watching. This can be done by allowing the foal with the dam or other horses only while nursing, and then shutting it into a loose box stall or paddock by itself. It is not probable it will eat its own feces. The diarrhea can be checked by giving 40 drops laudanum in a little of the dam's milk every four hours until it ceases. The addition of two ounces lime water to each dose will give good results. The only means of checking the habit of eating feces is to keep it away from temptation as advised, or devise other means of making its indulgence impossible. A muzzle might be worn, and removed at intervals to allow it to nurse. V.



Woman's Rights

It is your inalienable right to demand in a range—Economy, Promptness and Satisfaction. It is your privilege to expect the same attention, progress and efficiency in the things you use in your daily work as have been brought about in other and often less important lines of endeavour.

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At present one nice red bull 12 months old (of the Bellona family) for sale at low price. Heifers of breeding age all sold.

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Shorthorns and Swine—Am now offering a very choice lot of cows and heifers, safe in calf, and some choice young bulls for the fall trade; also Berkshire and Yorkshire pigs; showyard material.

ISRAEL GROFF, Elmira Ont.

QUESTIONS AND ANSWERS. Miscellaneous.

ANOTHER PLANK-FRAME.

As I am preparing to build a barn, and as timber is very scarce and costly in our part of the country, thought I would build a plank-frame. Our framers here have never had any experience in building plank-frames. The carpenter I intend to have for my job, says he thinks he could do it if he had the number of pieces and the length, and where they were to go. My barn will be 50 x 70 feet, 20 posts, hip roof. Our mill men charge about \$30 per thousand for square timber. G. S. W.

Ans.—Owing to the difficulty in getting long planks, I have not been recommending barns being built over 16 feet high in the side wall, and so I am giving you a list of material for one 50 x 70 x 16 feet, and if you find that you can procure the planks of a suitable length, you can add 4 feet on to all the vertical timbers, and make your barn 20 feet high. However, I think that one built with a gambrel roof, will hold plenty if the walls are 16 feet high.

Possibly a few suggestions on the materials to use may be helpful, and in this direction I would suggest, if you use two-ply floor, to lay building-paper over the first, and then use 1-inch strips on 24-inch centres between this and the second, so an air space is provided which prevents the moist air in the stable below from condensing on the ceiling.

The covering for the walls of the barn may be corrugated iron, and I would strongly recommend this for the roof. If you use any cupalos, set one at 17 feet 9 inches from each end, to give a proper appearance to the roof.

In the frame, use 6 bents on about 14-foot centres, and provide the following material for a 50 x 70 x 16-foot barn.

- One End Bent.
- S. Posts—10 pieces 2 x 12 in. x 16 ft.
 - T. Purlin posts—4 pieces 2 x 12 in. x 31 ft. 3 ins.
 - U. Cross sills—4 pieces 2 x 8 in. x 25 ft.
 - V. Beams—4 pieces 2 x 8 in. x 25 ft.
 - W. Beam stiffeners—1 piece 2 x 10 in. x 30 ft.
 - 10. Post stiffeners—3 pieces 3 x 6 in. x 16 ft.
 - Y. Purlin brace—2 pieces 2 x 8 in. x 16 ft.
 - X. Gable stiffeners—2 pieces 2 x 10 in. x 25 ft.
 - Z. End girths—20 pieces 2 x 6 in. x 13 ft.
 - Y. 1. End braces—2 pieces 2 x 6 in. x 20 ft.
 - Z. 1. Gable girths—4 pieces 2 x 6 in. x 24 ft.
 - Z. 2.....—4 pieces 2 x 6 in. x 22 ft.
 - Z. 3.....—4 pieces 2 x 6 in. x 20 ft.
 - Z. 4.....—2 pieces 2 x 6 in. x 17 ft.
 - (13) End truss—2 pieces 2 x 10 in. x 26 ft.
 - (11) Post fillers—3 pieces 2 x 4 in. x 15 ft.
 - (12) 8-in. bolts—8 lbs.
 - 5-in. spikes—35 lbs.
 - 4-in. spikes—12 lbs.

- One Interior Bent.
- A. Side post—4 pieces 2 x 12 x 16 ft.
 - B. Purlin post—4 pieces 2 x 12 x 31 ft. 3 in.
 - C. Roof supports—2 pieces 2 x 12 x 34 ft. 6 in.
 - D. Sub. supports—2 pieces 2 x 6 in. x 14 ft.
 - E. Struts—4 pieces 2 x 4 in. x 4 ft. 9 in.
 - F. Main ties—2 pieces 2 x 8 in. x 5 ft. 7 in.
 - G. Sub. ties—2 pieces 2 x 6 in. x 6 ft.
 - H. Minor ties—2 pieces 2 x 6 in. x 5 ft.
 - Z. Collar ties—2 pieces 2 x 12 in. x 4 ft. 6 in.
 - J. Braces—2 pieces 2 x 6 in. x 6 ft.
 - K. Cross sills—2 pieces 2 x 8 in. x 50 ft. or 4 pieces 2 x 8 in. x 25 ft.
 - L. Short sills—2 pieces 2 x 8 in. x 2 ft.
 - M. Roof support stiffeners—2 pieces 2 x 6 in. x 24 ft.
 - N. Purlin post—2 pieces 2 x 6 in. x 24 ft. 4 in.
 - O. 11-in. bolts—4 lbs.
 - P. 7-in. bolts—16 lbs.
 - Q. 5-in. spikes—28 lbs.
 - R. 4 in. spikes—8 lbs.

In getting the total estimate of material, double that given for one end (Concluded on next page.)

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WHY be satisfied with 15 or 20 bushels per acre when you can double the crop if you try? Those who use the A. A. C. Co. fertilizers are harvesting large crops of first quality A-1 wheat, and if you are not yet acquainted with the merits of these fertilizers it will pay you to investigate them. To ripen large crops of early plump grain requires a large amount of available phosphoric acid derived from the best sources.

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are well known crop producers and every analysis is guaranteed to be as represented. They are easily applied because they are so finely ground. They can be sown with a grain drill before planting or scattered by hand from the wagon if you have no drill, and then harrowed in.

At Dashwood, Ontario, Louis Walper says: "I had one of the biggest crops ever seen on this farm, following the use of 'HOMESTEAD' fertilizers."

At Thetford, Ontario, Wilson Bros., say: "We are well satisfied that it does not pay to sow wheat without them" and Mr. H. Wilson, of the same place writes: "Each year I sow a piece without fertilizer and the difference is so great I am fully convinced it does not pay me to sow wheat without the 'HOMESTEAD'."

At Arkona, Ontario, Mr. J. A. Gordon, says: "I have used 'HOMESTEAD' fertilizer about five years. The first year I shut it off once across the field and my neighbor said he could see that strip 8 rods away; and it could be seen for two years afterward in the meadow, so I think it pays all right."

Consult our nearest local agent for prices and terms, or send your name and address to us and we will mail you free, postage paid, a 52 page book on Fertilizers and Dr. Widsöe's article on "How to Fight Drought with Fertility."

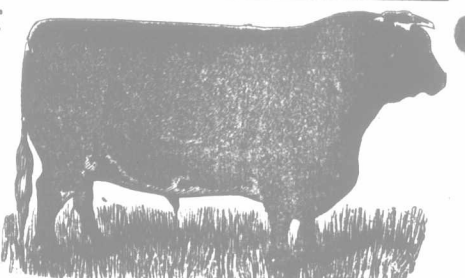
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At moderate prices, including Marr Missies, Emmas, Cruickshank Nonpareils, Duchesse of Glosters, Village Girls, Bridesmaids, Butterflies, Kinellar Clavets, Miss Ramsdens, Crimson Flowers; also a number of the grand old milking tribe, which have been famous in the showing.

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Have now a choice lot of young bulls to offer; also with something nice in heifers. Catalogue of herd and list of young animals on application.

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JOHN CLANCY, Manager



THIS IS A GOOD TIME, AND I HAVE A GOOD PLACE, TO GET A HIGH-CLASS SCOTCH SHORTHORN BULL CALF by my great Whitehall Sultan sire, or a young cow in calf to him, to start a herd that will be gilt-edged. SHROPSHIRE RAMS AND EWES, too, at low prices. CHILDREN'S PONIES. A CLYDES-DALE FILLY, such as I can send you, is one of the best things any man can buy. Just write me and say as nearly as possible what you want, and I will surprise you with prices on goods that are genuine. **ROBERT MILLER, STOUFFVILLE ONTARIO**

Scotch Shorthorn Females for Sale I am offering at very reasonable prices, females from one year to five years of age. The youngsters are by my grand old stock bull, Scottish Hero (imp.) =55042= (90065), and the older ones have calves at foot by him, or amongst them. A. EDWARD MEYER, Box 378, GUELPH, ONT.

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 Headed by Gainford Marquis, undefeated bull of three countries. See our show herd at the leading fairs, starting at Winnipeg. **J. A. WATT, SALEM, ELORA STA., G. T. and C. P. R.**

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The most profitable dairy breed, greatest in size, milk, butter-fat and in vitality. Send for FREE illustrated descriptive booklets.
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MINSTER FARM
Offers YORKSHIRES of both sexes, and a HOLSTEIN BULL, CA F from a daughter of P. P. C. Burke, whose daughters are testing from 4.4 to 5.5% fat; sired by Lakeview Burke Fayne, whose dam and sire's dam average 23 1/4; his sire has 10 sisters averaging 30.63. For extended pedigree write: **RICHARD HONEY & SONS, BRICKLEY, ONT.**

The Maples Holstein Herd

offers a splendid lot of bull calves, all sired by Prince Aaggie Mechthilde and all from record of merit dams. For pedigrees and prices write
WALBURN RIVERS,
Folden, Ontario

Maple Grove Holsteins Herd headed by King Lyons Hengerveld, the greatest 30 lbs. back butter-bred bull of the breed in this country. For stock of this kind, address:
H. BOLLERT, Tavistock, R. R. No 5, Ontario

Maple Line Holsteins and Yorkshires—Herd headed by Homestead Colantha Sir Abbekerk 2nd, whose dam, sire's dam, g. dam, average 29.61 lbs. butter 7 days. For sale at bargain prices, choice bull calves from R.O.P. cows. **W. A. BRYANT, Middlesex Co., Cairngorm, Ont.**

"They say you used to be one of the fastest fellows out," said the prison chaplain sadly. "Yes," replied Simon, the lag, as he thumped the iron bars, "and now I'm one of the fastest in."

AFTER THE PERFORMANCE.
He gave a marvellous performance—could tell blindfolded what card you drew from the pack, could hold you by the hand and open a book to the very passage you were thinking of, and could find rings and pins hidden in impossible places, all by mental process. After the entertainment the marvellous mind-reader stood in the lobby at the cloak-room door, and made a big row. "I've mislaid that measly hat-check you gave me," he shouted, "and I can't find my hat anywhere. If somebody don't get it for me without further delay I'll sue for damages!"

Had Indigestion, Sour Stomach and Severe Headaches FOR OVER A YEAR

Mr. W. Moore, 132 Lisgar St., Toronto, Ont., writes:—"After having been troubled with indigestion, sour stomach, and severe headaches for over a year, I was induced to try Milburn's Laxa-Liver Pills. One vial greatly benefitted my case, and three vials completely cured me. I can heartily recommend them to any one suffering from stomach or liver trouble."
Milburn's Laxa-Liver Pills stimulate the sluggish liver, clean the coated tongue, and remove all waste and poisonous matter from the system.
Price, 25 cents per vial, or 5 vials for \$1.00, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

QUESTIONS AND ANSWERS. Miscellaneous.

bent and multiply each item for one interior bent by 4 to get amount required for that number of bents.
I am giving the bill in this way to help other readers who may want to make a bill of material for a barn with a different number of interior bents. The bill of material for girths and plates is not necessary as any carpenter can make this up, the lengths being the distance from centre to centre of bents. Huntingdon Co., Que. A. A. G.

INSURANCE.

Would like to know, through your paper, the safest insurance company for farmers to insure their buildings in.
SUBSCRIBER.
Ans.—Such a question is impossible to answer through these columns. There are dozens of safe and reliable fire insurance companies operating in Canada, and besides our advertising columns are used by companies to make known their business.

DUMB WAITER.

Would you please give me a description and tell how to build the latest-improved dumb waiter?
A. P. F.
Ans.—We are not in a position to state which is the best dumb waiter made, but are inclined to believe that the simpler it is the better, as the more complicated forms sometimes give trouble. Any of our readers who have satisfactory dumb waiters installed are invited to describe them through these columns.

SOFT-SHELLED EGGS.

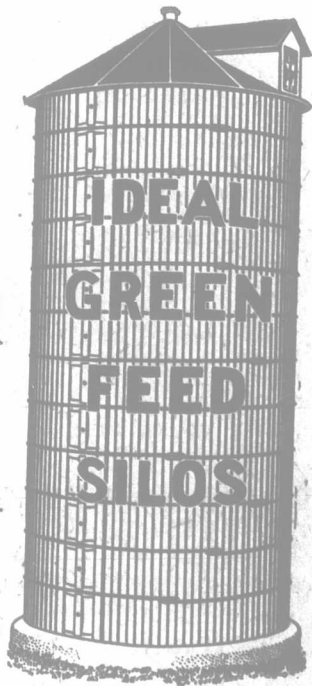
Kindly explain cause of a hen laying soft-shelled eggs at this season, with large ramble.
D. M.
Ans.—If a healthy, laying hen, is examined, eggs will be found in nearly all stages of development, from the size of a pea, and smaller, up to mature size. Soft-shelled eggs are sometimes caused by a lack of lime in the food. An over-fat condition of the hens is a very common cause, but perhaps a more common one still is inability to retain the egg until it is fully developed. It is, in other words, simply premature laying, caused very often by the hen being temporarily weak. Do not feed on too stimulating food, and keep the hen quiet for a day or two.

HERNIA IN COLT.

I have a colt now six weeks old which has had a small rupture on navel since birth. Navel healed, and colt did well. There is a break in inside lining about size of a penny.
1. Can I put on a truss to cure it?
2. Would a clamp be better? The skin is loose around navel. Lump is now about size of a small hen's egg.
QUEBEC READER.
Ans.—In most cases nature effects a cure of umbilical hernia in foals. Where this does not appear to be taking place, and the enlargement is increasing in size, probably the safest mode of treatment is by a truss. Some veterinary practitioners have trusses made for the purpose. They can be made out of leather or canvas. A truss consists in a strap of leather or canvas about six inches wide, with a protrusion about three inches in diameter and one and one-half to two inches in depth on the center of it. The truss is placed so that this protrusion presses upon the tumor and keeps the intestine pressed into the abdominal cavity. Straps or strings may be used to keep the truss in position, and also straps or strings extending from the bottom and top of truss and fastened to a strap around the colt's neck to keep truss from slipping backward. Allow the colt to run with the dam, and leave the truss on until the opening closes, which usually takes from four to six weeks. If properly adjusted, it will not scarify. If this fails to cure, get a veterinarian to operate. There is some danger of tetanus from an operation, but if the truss fails, the risks must be taken.

Shipments of Clydesdales from Glasgow for Canada the last week in July totalled 42 head, consigned to T. H. Hassard, Markham, Ont.; John A. Boag & Son., Queensville, and G. A. Brodie, Newmarket.

Don't Delay another day ordering an Ideal Green Feed Silo



Don't put off ordering your silo thinking that there is still plenty of time.

There has been such a demand for Ideal Green Feed Silos this year that some farmers who wait too long may get left.

The late corn, even if planted in July, will make fine silage. Get your order placed now and your new silo up in time to take care of your corn.

You know you ought to have a silo, so what's the use putting off ordering it a single day longer.

Thousands of successful owners are thankful for the day they erected an Ideal Green Feed Silo on their farms.

Our large, illustrated Silo Book contains much valuable information about silos and silage. Sent free upon request.

DE LAVAL DAIRY SUPPLY CO., LTD.
LARGEST AND OLDEST SILO MANUFACTURERS IN CANADA
173 William Street, MONTREAL 14 Princess Street, WINNIPEG

Brampton Jerseys
Bulls fit for service are getting scarce. Just a few left. Yearling heifers in calf are in great demand; 6 for sale; 6 now being bred. Brampton Stockwell the sire. A few good cows and some calves for sale. Production and quality.
B. H. BULL & SON, Brampton, Ont.

KING SEGIS WALKER
The highest pedigreed sire in Canada. Average record of dam, gr. dams, and g. dams: Butter, 28.36 lbs.; milk, 544.42 lbs.; fat, 4.24 lbs. Fee for service, \$25. This sire's get are 80 per cent. females. For sale: A grandson of King Segis and Pontiac Pet, record 37.67 lbs. butter and the world's champion; also a bull calf whose dam is a daughter of Pontiac Korndyke, and A. A. FAREWELL, OSHAWA, ONTARIO, just completed a record of 722 lbs. in 7 days.

LAKEVIEW HOLSTEINS!
Bull calves sired by Dutchland Colantha Sir Mona, and out of heifers sired by Count Hengerveld Fayne De Kol.
Telephone. E. F. OSLER, BRONTE, ONTARIO

Fairview Farms Herd
Is where you can secure a son of Pontiac Korndyke, admitted by all breeders to be the greatest Holstein sire that ever lived. Look what his daughters are doing. Two of them with records over 37 lbs. each. Then, look at the work his sons are doing. HE IS THE GREATEST PRODUCING SIRE OF THE BREED, THROUGH HIS SONS. Every son of Pontiac Korndyke that has daughters old enough to milk is a sire of good ones. We can offer you several young ones that will give you great daughters.
E. H. DOLLAR,
HUEVELTON, N. Y.

SUMMER HILL HOLSTEIN CATTLE and YORKSHIRE HOGS
Our senior herd bull, Sir Admiral Ormsby, is the sire of the world's record 2-year-old for yearly butter production. Also sire of the highest record four-year-olds in Canada. The dam of our junior herd bull made 34.67 lbs. butter in 7 days, and gave 111 lbs. milk per day. Come and make your selection from over 70 head. In Improved English Yorkshires we have won 95 per cent of first prizes at Toronto Exhibition for ten years. We are still breeding them bigger and better than ever. Buy Summer Hill Yorkshires, the quick-maturing kind, and double your profits.
D. C. FLATT & SON, R. F. D. No 2 Hamilton, Ontario Bell phone: 2471, Hamilton

Holsteins, Yorkshires, Hackneys
Our herd of over 30 Holstein females, from calves up, are for sale. Come and make your own selection. In Yorkshires we have a large number of young sows, bred and ready to breed, of the Minnie and Bloom tribes. No fancy prices asked.
A. WATSON & SONS, R. R. No 1, St. Thomas, Ont. L.-D. phone from Fingal.

VERGREEN STOCK FARM
Present offering: Two young bull calves; good individuals; nicely marked and well bred; the dam of one of them being Uniclay Abbekerk, the cow that topped the consignment sale of the Oxford District Holstein Breeders' Club. Priced right for immediate sale.
A. E. Hulet, Norwich, Ont.

Silver Creek Holsteins
We are now offering about a dozen yearling heifers and 3 young bulls. They are all of superior type, and officially backed on both sides. King Fayne Segis Clothilde, whose 7 nearest dams have 7-day records that average 27 lbs., is at head of herd. A. H. TEEPLE, CURRIES P. O., Ont., Woodstock Station. Phone connection.

Subscribe for The Farmer's Advocate

PANDORA RANGE

PANDORA
—that's the name of the range you will finally buy— why experiment with inferior ranges when the Pandora is guaranteed to give utter satisfaction. 105

McClary's Stockwood Ayrshires

are coming to the front wherever shown. This herd is now headed by White Hill Free Trader (Imp.) No. 33273, championship bull at Sherbrooke; also headed the 1st-prize aged herd. Stock of all ages for sale. Satisfaction guaranteed.

D. M. WATT, ST. LOUIS STATION, QUE.
Telephone in house.

AYRSHIRES FOR SALE

Seven bulls and a few heifers of different ages, sired by Woodroffe Comrade, whose first heifer in milk, gave 11,392 lbs. milk, 480 lbs. butterfat in one year. Prices right. **H. C. HAMILL, BOX GROVE P. O. ONT., Markham, G. T. R.; Locust Hill, C. P. R.** Bell phone connection from Markham.

CHERRYBANK AYRSHIRES

We are offering 5 young bulls fit for service, from dams of 40 lbs. to 50 lbs. daily of 4% milk. Anything else in the herd priced reasonable. This herd won over \$1,200 prize money in 1911.
P. D. McArthur, North Georgetown, Que.

HIGH-CLASS AYRSHIRES

If you are wanting a richly-bred young bull out of a 50-lb. a day and over cow, imported or Canadian-bred dam and sire, write me. Females all ages. Prices are easy. **D. A. Macfarlane, Kelse, Que.**

Dungannon Ayrshires and Yorkshires

For immediate sale are: Three choice young bulls and a few heifers; also young sows of breeding age, quality and breeding combined.
W. H. FURBER, Cobourg, Ont. L.-D. Phone



STOP THIS WITH COOPER'S FLY KNOCKER
It pays to keep your stock free of flies—contended cows give 1/2 more milk; horses work harder and on less feed. Costs less than 1/2 cent a head per day. Use Cooper's Fly Knocker and save money. Easy to use—economical—efficient—safe. Quarts (Imperial) 50c; Gallons (Imperial) \$1.25. Special circular free—tells what others say about Cooper's. Any dealer or **WM. COOPER & NEPHEWS - TORONTO**

Southdown Sheep

The market-to-day demands quality. It pays to breed what the market wants. Can you do this more cheaply or quickly than by heading your flock with a right good ram of this most perfect of mutton breeds? Orders taken for a few sturdy young rams for fall delivery.
ROBT. McEWEN, Alloway Lodge Stock Farm Byrn, Ontario

Tramp—Wunst I wuz so hungry I ate a house.
Mrs. Goodly—How terrible!
Tramp—No'm; it wuz fine; it wuz a porterhouse.

CLEAN HANDS



SNAP
ANTISEPTIC HAND CLEANER
PREPARED BY SNAP COMPANY LIMITED MONTREAL.
15c a Tin.
Don't let them fool you with a cheap imitation SNAP is the ORIGINAL and BEST HAND CLEANER. Will remove grease and stains of all kinds.

QUESTIONS AND ANSWERS. Miscellaneous.

BLACK MEDICK.

Would you be kind enough to let me know what the enclosed plant is? Is it a bad weed, or is it some kind of clover?

Ans.—The plant sent is trefoil, or black medick (*Medicago lupulina*). In Europe this plant is looked upon as a profitable pasture crop, but it is rightly considered a weed in Canada, where the seed of it is a common impurity in common red clover and alsike seed. Sheep are fond of it, and will keep it down. It is not troublesome in grain or hoed crops, but gives considerable trouble in clover grown for seed.

BLADDER CAMPION AND KNOT-WEED.

What are the enclosed weeds?

Ans.—The specimens are bladder campion and knotweed. Readers generally should be by this time pretty well informed as to the appearance and character of bladder campion. It has been frequently described in these columns, and it is, unfortunately, becoming so widely distributed, and it is so conspicuous and troublesome to eradicate when established, that many of them must know it well by observation. It gets its name from the bladder-like covering of the seed capsules which succeed the rather pretty white flowers. The plant is smooth, branching, with opposite, pointed leaves, arising at swollen joints of the stem. It develops a strong, branching, and deeply penetrating, perennial root, and bears numerous seeds having strong vitality. Prevention is easier than cure. Grub it out on its first appearance. Summer-fallowing, and short rotation, with deep cultivation, are recommended for badly-infested fields. Cutting and salting the root can be carried out when the plants are not too numerous.

Of the other plant, we have not received enough material to be sure of which one of three prairie knotweeds it is. These are fine, wiry-stemmed plants, with seeds resembling those of the false buckwheat, or bindweed, common in the grain fields. The treatment that cleans up such stubble-weeds as pigeon grass (foxtail), false buckwheat, etc., will control the annual knotweeds.

THREE WEEDS.

What are the names of the enclosed plants, and are any of them bad weeds? No. 1, apparently of the clover family, is the whole plant, found growing in the hay field. No. 2, with the little, blue flower close to the stem, and a large leaf, which grows on the stem near the roots of plant, is found in old sod, and is over four feet in height, and springs from the roots in half a dozen stocks, and branches out up the stocks. This is the only large tap root found. No. 3, with the yellow flower, like a dandelion, is a single stock about two feet high, found growing in fence row.

Ans.—No. 1 is a clover, but one that is not very common in America. The yellow flower is an easy means of distinguishing it from other clovers. It is commonly known as hop clover (*Trifolium agrarium*). It is not likely to prove harmful. The weed labelled No. 2, and having the blue flower, is chicory (*Cichorium intybus*), a rank-growing, deep-rooted perennial. The only place it gives trouble is in pastures or fence corners, and on roadsides. It soon yields to cultivation and a short rotation of crops. Where impossible to plow, cut the plants and apply salt to the roots. With regard to No. 3, there is scarcely enough of the plant to make identification at all easy. We would urge those sending in specimens to send the entire plant, root, stem, leaf, and flower, whenever possible. From the portion sent, No. 3 appears to be common annual sow thistle (*Sonchus oleraceus*). This is not nearly so troublesome a weed as the perennial variety. Simply cut it to prevent seeding in waste places or fence corners. In cultivated fields it readily yields to frequent cultivation and rotation of crops.



GLENHURST AYRSHIRES

Established over 50 years ago, and ever since kept up to a high standard. We can supply females of all ages and young bulls, the result of a lifetime's intelligent breeding: 45 head to select from. Let me know your wants.
JAMES BENNING, Williamstown P.O. Summerstown Sta., Glengarry

STONEHOUSE AYRSHIRES

Are coming to the front wherever shown. Look out for this at the leading exhibitions. Some choice young bulls for sale, as well as cows and heifers.
HECTOR GORDON, Howick, Quebec.

City View Ayrshires—Bonnie's Messenger 32762 at head of herd, both dam and gr. dam R. O. P. cows. One yearling bull a d calves of either sex. Will sell a few cows.
JAMES BEGG, R. No. 1 St. Thomas One and a half miles from all stations.

Hillcrest Ayrshires—At head of herd is Ivanhoe of Tanglewild, a son of the champion Ayrshire cow, Primrose of Tanglewild, R. O. P. test 16,195 lbs. milk and 625.62 lbs. fat; 60 head to select from. Inspection invited.
F. H. HARRIS, Mt. Elgin, Ont.

Ayrshires and Yorkshires—We now offer at bargain bull calves dropped in July, 1911. All bred from (imp.) sire and from either dams with good records, or their daughters either imported or home-bred. Some choice February pigs; also young pigs.
Alex. Hume & Co., Menie, Ont.

Shropshires and Southdowns

I have for sale a good lot of yearling rams and ewes, also a few good lambs, of both breeds. Have still left a few fitted Southdown ewes—good ones. LOOK OUT FOR MY EXHIBIT AT THE CANADIAN NATIONAL EXHIBITION THIS YEAR.

C. Hodgson, Brantford, Ont. Shropshires and Cotswolds!

In SHROPSHIRE I have for sale 35 imp. shearing rams and ewes from some of England's best flocks, a lot of fine home-bred rams and ewes bred from Minton and Buttar ewes. In COTSWOLDS a lot of rams and ewes, and an extra good lot of lambs. A few of each breed fitted for showing. Order early and get a good choice. Prices very reasonable.

Claremont Station, C. P. R., three miles. Pickering Station, G. T. R., seven miles.
John Miller, Brougham, Ont.

AMERICAN SHROPSHIRE REGISTRY ASSOCIATION

Only Shropshire Association recognized by U. S. Government Largest membership of any live-stock association in the world. Life membership \$5.00. No yearly dues. Write for information. **J. M. WADE, SECRETARY, LAFAYETTE, INDIANA**

FARNHAM OXFORDS and HAMPSHIRE

The Oldest-established Flock in America Our present offering is a grand lot of yearling rams and ram lambs of both breeds. Also a few fitted yearling ewes and ewe lambs by our imported champion rams, and some from imported dams; also 50 fine yearling field ewes. Prices moderate.
HENRY ARKELL & SON, ARKELL, ONTARIO
Phone connection Guelph.

Cattle and Sheep Labels

Size	Price doz.	Fifty tags
Cattle	75c.	\$4.00
Light Cattle ..	60c.	1.50
Sheep or Hog ..	40c.	1.00

No postage or duty to pay. Cattle sizes with name and address and numbers; sheep or hog size, name and numbers. Get your neighbors to order with you and get better rate. Circular and sample. Mailed free. **F. G. JAMES, Bowmanville, Ont.**

MAPLE GROVE YORKSHIRES

AS GOOD AS ANY. S. H. Jack (imp.) champion and silver medal boar at Toronto for three successive years at head of the herd. Present offering: Fifteen young sows all good, being bred. Eight young boars fit for use; choice long fellows of excellent breeding and younger pigs of various ages. Pairs not related. Our prices will suit the average farmer, but are consistent with the best quality. Stock shipped C. O. D. and on approval. Correspondence and personal inspection invited. Long-distance phone via St. Thomas.
H. S. McDIARMID, FINGAL, ONTARIO
Shedden Station, P. M. and M. C. R.

Large White Yorkshires

Have a choice lot of sows in pig. Boars ready for service and young pigs of both sexes supplied not akin, at reasonable prices. All breeding stock imported, or from imported stock, from the best British herds. Write or call on:
H. J. Davis, Woodstock, Ont.
C. P. R. and G. T. R. Long-distance phone.

HAMPSHIRE SWINE

Both sexes and all ages, from imported stock. Prices reasonable.
C. A. POWELL, Arva, Ontario
Four miles north of London.

The Tamworths in Canada

I have a particularly nice lot of young Tamworths just now of both sexes, from youngsters up to breeding age. If you want the best types of the breed, write me. **HERBERT GERMAN, St. George, Ont.** Long-distance phone.

ADVOCATE ADVERTISEMENTS PAY.

FOR SALE: A NUMBER OF CHOICE YOUNG Large English Berkshire Pigs

Bred from prizewinning stock on both sides. They are of that bacon type you are looking for. Prices cheap for quick sale.
WESLEY HARRIS, EFFINGHAM P. O., ONTARIO, R. R. NO. 1

Large English Berkshires

Present offering: Sows bred and ready to breed. Two choice year-old boars; also young stock of both sexes. All from imported stock. Prices reasonable.
C. J. LANG, Hampton, Ont.

Duroc Jersey Swine

A choice lot of boars for service. WANTED—Twenty dairy calves, seven to twenty days old, grades or pure bred; state price F.O.B.
Mac Campbell & Sons, Northwood, Ont.

When writing mention Advocate

ELMHURST LARGE ENGLISH BERKSHIRES

Present offering: Select sows. Choice boars ready for service also younger stock, livery guaranteed. **H. M. VANDERLIP, Essex and Importer, CAINSVILLE P. O. Langford station, Brantford and Hamilton Radial.**

Newcastle Tamworths and Shorthorns

Present offering: Seven boars from 6 to 10 months old; boars and sow pigs 6 weeks to 4 months; sows bred and others ready to breed, from such noted stock as Colwill's Choice, Canada's champion boar, 1901, '02, '03 and '05, and Imp. Cholderton Golden Secret. Also a few choice Shorthorn heifers in calf; beef and milk combined. Show stock a specialty. Prices right.
L.-D. Phone. A. A. Colwill, Newcastle, Ont.

Registered Tamworths

Merton Lodge is offering Tamworths, either sex, from six weeks to four months old. The true bacon type, having great bone and length. We pay express charges and guarantee satisfaction.
W. W. GEORGE, Crampton, Ont.

Hampshire Pigs

PRESENT OFFERING—7 Sows in pig from imported stock. Write for prices. Long-distance phone.
J. H. RUTHERFORD, Box 62, Caledon East, Ont.

Hampshire Hogs

We have the greatest prize-winning herd of Hampshire Swine in Canada, bred from the best strains of the breed; stock of both sexes not related. **Hastings Bros. Crosshill P. O., Ont., Linwood Sta., C.P.R., Newton Sta., G.T.R.** Telephone in residence.

Morrison Tamworths

Bred from the prize winning herds of England; choice stock for sale; also Shorthorns of the deep milking strain.
CHAS. CURRIE, Morrison, Ontario

GOSSIP.

The business hitherto carried on under the name of the Park-Graham Milling Co., by Louis C. Park and Andrew Graham, was dissolved by mutual consent on August 1st. L. C. Park is to pay and collect all outstanding debts and accounts.

C. C. CHAMPIONS AND OTHER WINNERS IN T. H. HASSARD'S IMPORTATION.

T. H. Hassard, of Markham, Ont., has arrived home from Scotland and France with his 1912 importation of Clydesdale, Percheron and Hackney stallions and fillies. Comfortably stabled in his well-arranged barns at Markham, are now something over seventy head, among which are many that have won honors in the leading show-rings of Scotland and France, including the renowned Cawdor Cup, the leading and most coveted prize offered by the big shows in Scotland. Dr. Hassard's importations for several years past have been among the best that left Scotland, the one of last year being particularly good, and that the high-class character of that importation met with the approval of the buying Canadian public, was evidenced by the short time in which they were distributed to their many satisfied buyers. The lot just landed are away the best ever imported by Mr. Hassard, flashy quality of underpinning, big size, and breed character, coupled with stylish tops and straight, true action, are the predominating characteristics of the entire lot, and is as manifest among the Percherons as among the Clydesdales. On hand just now are 29 Clyde stallions, 17 Clyde fillies, 10 Percheron stallions, 9 Percheron fillies, 2 Hackney stallions, and 3 Hackney fillies, the whole making a selection that for high-class quality and breeding stands unsurpassed on the continent. A few only can be individually mentioned, but a big lot will be out for competition at Toronto Exhibition, where it will be a pleasure for Mr. Hassard to meet his many friends and answer all inquiries. Prominent among the Clyde stallions is the last year's C. C. champion, Macaroon, the bay four-year-old son of Baron of Buchlyvie's best breeding son, Baron of Burgie, dam by the Glasgow prize horse, Sir Morrel MacKenzie, great-grandam by the famous Conqueror. It is not necessary to speak of the flashiness of quality, nor the ideal of type of this horse, his winning the highest prize offered in Scotland shows him to be one of the best the breed has produced in late years. Look him up at Toronto. Another but a very few points below him in style, conformation, character, quality, and action, is the brown four-year-old, Imperial Chief, by the great Imperialist, by Hiawatha, dam by Prince Royal, grandam by Laird o' Urie. He is a horse of magnificent style and quality, and should easily capture the admiration of Canadians. A great three-year-old is the big, flashy black, Sir Manuel, by the Lanark premium horse, Earl of Angus, dam by Royal Ensign, grandam by Macgregor, by Darnley. This colt has five numbered dams, and he is a coming topper in any company, as he has both the top and bottom that is carried by champions. A wonderful two-year-old, bred in the royal blue, is King of the Saxons, a brown, by the world-renowned Baron of Buchlyvie, dam by the famous sire of champions, Rozelle, grandam by the immortal Macgregor. Those mentioned are, with the exception of Macaroon, not selected numbers nor pedigrees, and are only representative of the lot. The Clyde fillies are up to equally as high a standard in quality and breeding. Many of them are show propositions of a high order. In Percheron stallions and fillies, a look over the lot will satisfy the biased mind that quality of bone, well-sprung ankles, big, wide feet, and big, thick, ton-weight bodies, are much in evidence. Dr. Hassard is showing a grand lot of Percherons. Their clean, superb quality of underpinning cannot fail to be admired for their big, thick, smooth bodies. In the lot are several pairs of well-matched mares that look extremely good to the west, and will certainly be much admired when they step into the ring at Toronto Exhibition.

C. Hodgson, of Brantford, Ont., in ordering a change in his advertisement of Shropshire and Southdown sheep, states that his sheep have done wonders in breeding and growing this year, and that he will be stronger this year than ever in both breeds at the Toronto Exhibition, having a good bunch of sale rams and ewes.

AN EXCEPTIONALLY FLASHY LOT OF PERCHERONS.

E. C. H. Tisdale, of the firm of Hodgkinson & Tisdale, of Beaverton, Ont., has lately landed in their nicely-arranged stables at Beaverton, an importation of Percheron stallions and fillies of a style and quality calculated to considerably enhance Mr. Tisdale's reputation as one of the cleverest horse judges in Canada, and as one who will have none of the common sort about him. It will be well remembered by all horse lovers the splendid quality and style of his last year's importation, the revelation their grand quality of underpinning, well-sprung ankles, and big, wide feet, proved to so many, and the sweeping success that was theirs at the leading Western shows and at Toronto. A year's additional experience in the intricacies of buying the toppers in Percheron horses in France has stood Mr. Tisdale in good stead this year by his knowing just where to go to get the best, and he certainly got them, 10 stallions and 12 fillies, which, with the several high-class Clydesdales on hand, make a selection of the two breeds for intending purchasers looking for toppers, very seldom met with in this or any other country. The stallions are two- and three-year-olds, the fillies and mares from one to four years. Prominent among the stallions is the thick, smooth, quality gray three-year-old, Jovial, a son of the great champion and sire of champions, Eutatuaie. This colt is one of the best of the breed that ever found its way to Canada. Up to a big size, he has quality to spare, and will surely make them all go some at Toronto this fall. Another in his class for all-round excellence and quality is his half-brother, Jural, a gray, three years old, by the same sire. Here are a grand pair of show horses that will please the most exacting. Another three-year-old is the black, Jurat. This fellow came out last year as a two-year-old, when he carried off first prize at Regina in a strong class. He is more rangy than the others, with a beautiful top, and faultless underpinning. In two-year-olds, there are five; two of them are blacks, the other three grays. They are an exceptionally choice lot, particularly good at the ground, with big feet, well-sprung ankles, and a flashy quality of bone. A model of beauty and quality, but not too big in size, is the gray, Cabot. He is surely an ideal in perfection of horse flesh. Another grand colt is the black, Kathoine, acknowledged in France as one of the best that ever left the country. These horses must be seen to be appreciated, and at Toronto Exhibition, Messrs. Hodgkinson & Tisdale will have a big exhibit, where all will be welcome. If Mr. Tisdale showed good judgment in his selection of stallions, he surely has done himself proud in his selection of mares and fillies, which range in age from one to four years. Four of the two-year-olds were winners at France's biggest show, that at Nogent-le-Rotrou, where, in a class of 86, they were placed second, third, fourth, and fifth, which, to anyone at all familiar with the show-ring conditions in France, is all that need be said of their high-class individuality and quality. Among the lot are beautifully-matched pairs in both blacks and grays. In Clydesdale fillies, the firm are showing some particularly nice quality and breeding in both imported and Canadian-bred. Look up the firm's exhibit at Toronto.

Wanted.—A good office boy. One who never forgets, who can keep his mouth shut, who never looks at the clock, and yet who is always on time; who can talk politely over the telephone, and who doesn't know how to whistle. Salary, ten thousand a year.—Life.

Canadian Northern Railway
50,000 HARVESTERS WANTED
EXCURSIONS
to Winnipeg \$10.00

Choice of destination left to the excursionist. Half-a-cent a mile from Winnipeg to Regina, Saskatoon, Warman, Swan River, Edmonton, and to all other points on the Canadian Northern Railway.

Returning, half-a-cent a mile from all points on C.N.R. to Winnipeg. \$18.00 from Winnipeg to original starting point.

DATES OF SALE

- AUG. 20.—From Toronto and Rosedale, C.N.O. and lines in Ontario, Toronto to Sarnia on G.T.R. and south thereof.
- AUG. 23.—From Toronto and all C.N.O. stations east and south of Sparrow Lake; all stations on Central Ontario Railway, and stations on Bay of Quinte except Kingston, also points on other lines north of G.T.R., Toronto-Sarnia line, and east of but not including Sharbot Lake and Renfrew.
- AUG. 28.—From Toronto, all C.N.O. stations east and south of Sparrow Lake; all Central Ontario Railway and Bay of Quinte stations, and points east of, but not including North Bay.
- AUG. 30.—From Toronto to Sparrow Lake on C.N.O.; also points on other lines, Toronto to North Bay, Sudbury and west thereof.

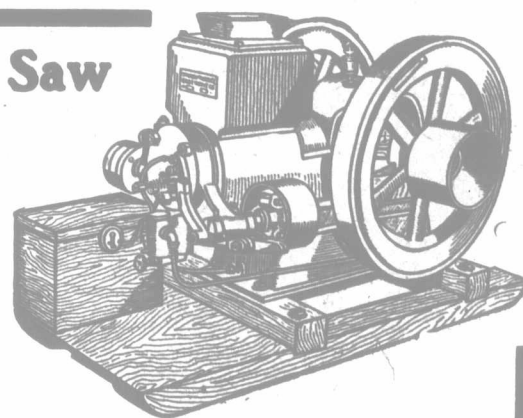
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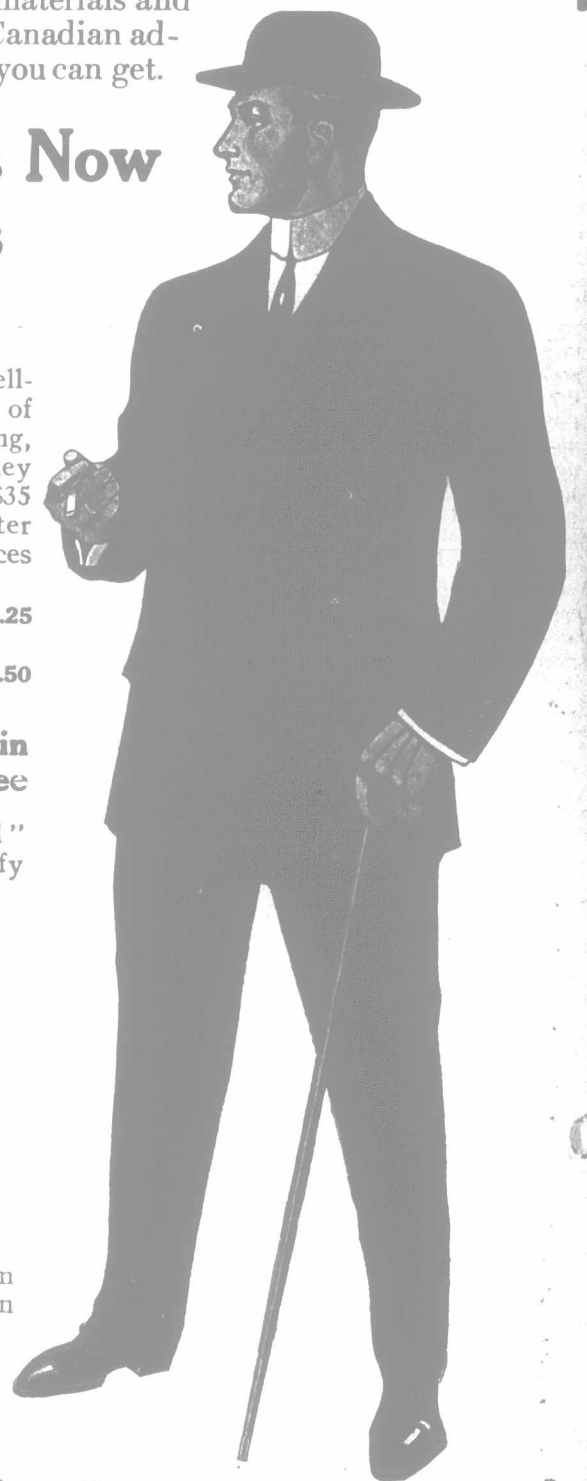
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